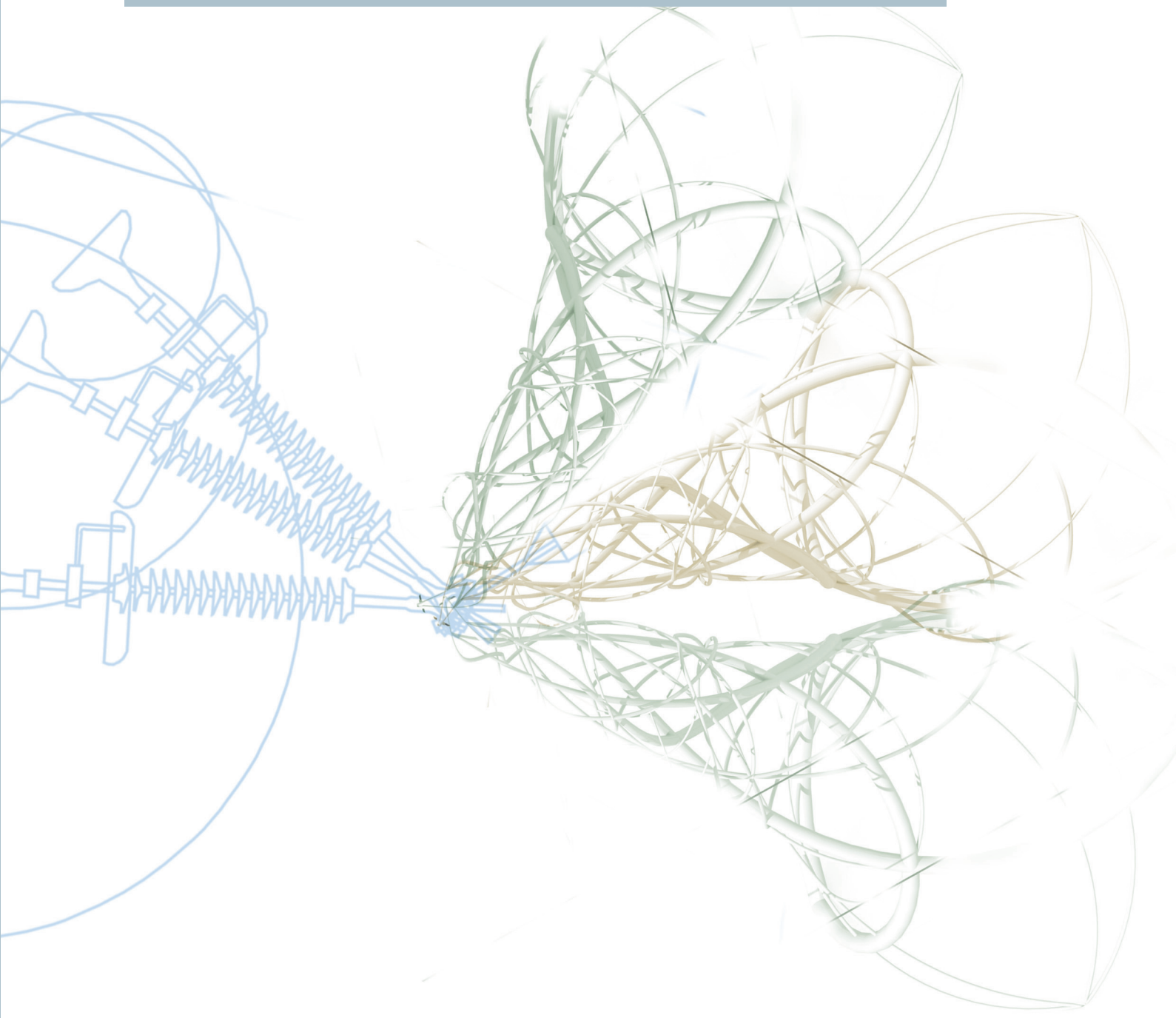
LANDSNET

Dómnefndarálit

Samkeppni um háspennulínumöstur

Selection comittee´s report for Competition on high-voltage transmission line towers



16.04. 2008

Samstrfsaðili: Arkitekktafélag Íslands

Collaborator: Association of Icelandic Architects

Kæru þátttakendur

Fyrir hönd Landsnets og dómnefndar um hönnun háspennulínumastra vil ég þakka þátttakendum kærlega fyrir framlag þeirra.

Það er samdóma álit dómnefndar að bæði fjöldi og gæði þeirra tillagna, sem bárust hafi verið langt umfram þær væntingar sem Landsnet lagði upp með við undirbúning samkeppninnar.

Meginmarkmið samkeppninnar var að leita að nýrri mastragerð, sem félli vel að umhverfinu, og lágmarkaði þannig hin sjónrænu áhrif, sem línumöstur óneytanlega hafa. Auk þess var lögð áhersla á lágmörkun raf- og segulsviðs. Dómnefnd telur að megin hluti þeirra tillagna, sem bárust í samkeppnina, hafi komið fyllilega til móts við þessi markmið. Að auki þykir dómnefnd hin fjölbreytta nálgun keppenda hvað varðar útlit og sjónræn áhrif flutningsvirkjanna einkar áhugaverð. Keppendur hafa ýmist lagt áherslu á að upphefja möstrin eða að fella þau vel að landslagi og þéttbýli. Dómnefnd metur það svo að báðar leiðir eigi rétt á sér og að keppendum hafi tekist vel að sýna hina margbreytilegu möguleika.

Tillögur þær sem bárust í samkeppnina eru verðugt innlegg í áframhaldandi þróun og hönnun háspennulínumastra framtíðarinnar.

Dómnefnd þakkar keppendum fyrir þátttöku þeirra í samkeppninni og óskar þeim velfarnaðar í framtíðinni.

Þórður Guðmundsson, forstjóri Landsnets hf

formaður dómnefndar

Aðdragandi

Fljótlega eftir stofnun Landsnets hf vaknaði umræða um það hvort ekki væri mögulegt að hanna háspennulínumöstur sem féllu vel að umhverfinu, jafnframt því sem lágmörkuð yrðu áhrif raf- og segulsviðs frá línunum.

Starfsfólk Landsnets er meðvitað um hin miklu umhverfislegu áhrif flutningsvirkjanna. Hjá þeim verður ekki komist, en þó má gera ráðstafanir til að fella flutningsvirkin betur að umhverfi sínu og lágmarka þannig þau áhrif sem hljótast af byggingu þeirra. Mikil vakning er í samfélaginu um nauðsyn þess að lágmarka inngrip í náttúruna og að sjónræn áhrif flutningsvirkja rafmagns verði sem minnst. Þessi hugmyndasamkeppni er einn þáttur í viðleitni Landsnets til að verða við þeirri ósk.

Markmið samkeppninnar

Markmið samkeppninnar var að fá nýjar hugmyndir að gerð og útliti masturs eða mastra í 220 kV háspennulínu. Landsnet lagði áherslu á að sjónræn áhrif mastranna (línunnar) yrðu skoðuð sérstaklega og að keppendur kæmu með tillögur að útfærslu mastra sem tækju tillit til þessa eins og kostur er og var þá bæði miðað við möstur (línu) nærri þéttbýli og í óbyggðu landi.

Lagt var í hendur keppenda hvort öll möstur yrðu með nýju útliti, einstök möstur í völdu umhverfi yrðu með nýju eða breyttu útliti, eða hvort útliti þekktra mastragerða yrði breytt með einum eða öðrum hætti Að auki var lagt í hendur keppenda hvort mastrið/möstrin væru látin falla vel að landslagi í dreif- og þéttbýli eða að mastrið/möstrin skæru sig úr á tilteknum stöðum.

Meginmarkmið keppninnar var að fram kæmi hugmynd að nýrri mastragerð eða nýjum mastragerðum, hugmynd að heildaryfirbragði línuleiða og að fram kæmi tillaga að mastri/möstrum sem unnt væri að þróa áfram með tilliti til umhverfisáhrifa, rafsegulsviðs, efnisvals, líftíma og kostnaðar.

Samkeppnin

Samkeppnin var almenn hugmyndasamkeppni um hönnun háspennulínumastra og var hún haldin í samstarfi við Arkitektafélag Íslands. Samkeppnin var auglýst bæði á Íslandi og erlendis.

Samkeppnistíminn var frá 6. febrúar til 28. mars 2008. Skilafrestur fyrirspurna var 3. mars 2008. Alls bárust 57 fyrirspurnir og var þeim svarað innan tilskilins tíma.

Tillögur sem bárust í samkeppnina voru 98 talsins.

Dómnefnd var skipuð fimm fulltrúum.

Útbjóðandi tilnefndi þrjá fulltrúa í dómnefnd. Þeir voru Þórður Guðmundsson, forstjóri Landsnets hf., formaður dómnefndar, Árni Stefánsson, tækni- og eignastjóri Landsnets hf. og Rolv Geir Knudsen, fyrrum framkvæmdastjóri tæknideildar Statnett.

Arkitektafélag Íslands tilnefndi tvo fulltrúa, sem voru arkitektarnir Jes Einar Þorsteinsson, arkitekt FAÍ og Örn Þór Halldórsson,arkitekt FAÍ.

Haraldur Helgason, arkitekt FAÍ var trúnaðarmaður samkeppninnar og Sigríður Sigurðardóttir, arkitekt var ritari dómnefndar.

Rágjafar dómnefndar voru Árni Björn Jónasson, hjá verkfræðistofunni Línuhönnun hf og Jón Bergmundsson, hjá verkfræðistofunni Afl.

Dómnefndarstörf

Tillögur voru hengdar upp í húsnæði Landsnets hf. við Gylfaflöt 9. Dómnefnd hélt fjóra formlega vinnufundi.

Samkvæmt samkeppnislýsingu leitaðist dómnefnd við að meta hverja tillögu út frá eftirfarandi:

- Sjónrænum áhrifum
- Gerð og útliti mastra
- Þróunarmöguleikum tillagna
- Umhverfisáhrifum
- Rafsegulsviði
- Hagkvæmni

Niðurstaða dómnefndar

Dómnefnd veitir eftirfarandi tillögum verðlaun:

verðlaun tillaga nr. 98 – merkt 22088. Verðlaunfé € 15.000,-
verðlaun tillaga nr. 20 - merkt 25019. Verðlaunafé € 10.000,-
verðlaun tillaga nr. 15 - merkt 10001. Verðalunafé € 5.000,-

Auk þess veitir dómnefnd eftirtöldum tillögum viðurkenningar:

Viðurkenning tillaga nr. 2 – merkt 01997. Verðlaunfé € 1.000,-
Viðurkenning tillaga nr. 3 - merkt 11731. Verðlaunafé € 1.000,-
Viðurkenning tillaga nr. 41 - merkt 30012. Verðlaunafé € 1.000,-
Viðurkenning tillaga nr. 50 - merkt 38000. Verðlaunafé € 1.000,-
Viðurkenning tillaga nr. 51 - merkt 05964. Verðlaunafé € 1.000,-

Dómnefnd valdi eftirtaldar tillögum sem sértaklega athyglisverðar:

Tillaga nr. 11 – merkt 35353
Tillaga nr. 25 – merkt 26540
Tillaga nr. 33 – merkt 28513
Tillaga nr. 52 – merkt 96833
Tillaga nr. 56 – merkt 80206
Tillaga nr. 64 – merkt 62578
Tillaga nr. 66 – merkt 12121
Tillaga nr. 70 – merkt 10001
Tillaga nr. 72 – merkt 21176
Tillaga nr. 79 – merkt 17717
Tillaga nr. 82 – merkt 12066

Að loknum lokafundi dómnefndar þann 16. apríl var trúnaðarmaður kallaður til og nafnleynd rofin.

Reykjavík, 16. apríl 2008

Dómnefndarmenn staðfesta með undirritun sinni dóm hverrar tillögu fyrir sig og niðurstöðu dómnefndar.

Þórður Guðmundsson, forstjóri Landsnets hf, formaður dómnefndar

Árni Stefánsson, tækni- og eignastjóri Landsnets hf.

Rolv Geir Knutsen, fyrrum framkvæmdastjóri tæknideildar Statnett

Jes Einar Þorsteinsson, arkitekt FAÍ

Örn Þór Halldórsson, arkitekt FAÍ

Dear participants:

On behalf of Landsnet and the Selection Committee on Design of High-voltage Line Towers, I wish to thank you kindly for your contribution.

It is the unanimous judgment of the Selection Committee that both the number and quality of the proposals received far exceeded Landsnet's expectations when it began preparing the competition.

The main goal of the competition was to look for new types of towers that would blend well into the environment and thus minimize the visual impact that the line towers undeniably have. In addition, emphasis was placed on minimizing electrical and magnetic fields. The Selection Committee believes that the majority of the proposals received for the competition have fully addressed these goals. In addition, the Selection Committee regards the competitors' diverse approaches regarding the appearance and visual impact of the transport structures especially interesting. The competitors have chosen to either glorify the towers or blend them carefully into the landscape and urban areas. It is the Selection Committee's view that both approaches have their place, and the competitors have succeeded well in showing the diversity of possibilities.

The proposals received for the competition are worthy contributions to the continuing development and design of high-voltage line towers of the future.

The Selection Committee thanks the competitors for their contributions to the competition and wishes them success.

Thórdur Gudmundsson, President and CEO of Landsnet hf

Chairman, Selection Committee

Lead-up to competition

Soon after the founding of Landsnet hf, discussion began of whether it would be possible to design high-voltage line towers that would blend well into the environment as well as minimize the impact of the lines' electromagnetic field.

Landsnet's employees are aware of the critic environmental impact of transport structures. This impact cannot be avoided although measures may be taken to blend the transport structures better into the environment, thus minimizing the impact of their construction. There is a great awakening in society regarding the necessity of minimizing intervention into nature and the visual impact of electricity transport structures. This competition of ideas is one aspect of Landsnet's attempt to comply with that wish.

Competition goal

The competition's goal was to obtain new ideas on types and appearances of a tower or towers for 220 kV high-voltage lines. Landsnet emphasized that specific consideration be given to the visual impact of towers (or lines), and that the competitors make proposals on the appearance of towers that would take this into account as much as possible, regarding towers or lines both near urban areas and in unsettled regions.

It was left up to the competitors whether all the towers would have a new look, particular towers and selected environments would have a new or altered look, or whether the appearance of known types of towers would be altered, one way or another. In addition, it was left up to the competitors whether the tower/towers were blended well into the landscape in rural and urban areas, or the tower/towers would stand out at specified sites.

The main goal of the competition was that an idea for a new type of tower or new types of towers would emerge, an idea on the overall appearance of line routes, and that a proposal would emerge on a tower/towers that could be developed further with respect to environmental impact, the electromagnetic field, lifetime and costs.

The competition

The competition was a general competition of ideas on the design of high-voltage line towers, and it was held in collaboration with the Association of Icelandic Architects. The competition was advertised both in Iceland and abroad.

The competition period was from 6 February to 28 March 2008 .

A total of 98 proposals were received in the competition.

The Selection Committee consisted of five representatives.

The buyer designated three representatives on the Selection Committee. They were Thórdur Gudmundsson, President and CEO of Landsnet hf, Chairman of the Selection Committee; Árni Stefánsson, Technology and Asset Manager of Landsnet hf and Rolv Geir Knudsen, former managing director of the Technical Department of Statnett.

The Association of Icelandic Architects (FAÍ) designated two representatives, the architects Jes Einar Thorsteinsson, FAÍ, and Örn Thór Halldórsson, FAÍ.

Architect Haraldur Helgason, FAÍ, was the competition's confidant and architect Sigrídur Sigurdardóttir, FAÍ, was Secretary of the Selection Committee.

The consultants of the Selection Committee were Árni Björn Jónasson from the engineering firm Línuhönnun hf and Jón Bergmundsson from the engineering firm Afl.

Selection Committee's work

The proposals were hanged up in the offices of Landsnet hf at Gylfaflöt 9. The Selection Committee held four formal work meetings.

In accordance with the competition specification, the Selection Committee sought to evaluate each proposal on the basis of the following points:

- Visual impact
- Type and appearance of towers
- Development potential of proposals
- Environmental impact
- Electromagnetic field
- Feasibility

The Selection Committee divided the proposals into two categories: on the one hand, proposals that would distinguish themselves for particular towers in selected environments and, on the other, towers that would be very suitable for line routes overall.

Selection Committee's conclusion

The Selection Committee awards prizes to the following proposals:
First prize, proposal no. 98 – marked 22088. Prize money € 15,000
Second prize, proposal no. 20 – marked 25019. Prize money € 10,000
Third prize, proposal no. 15 – marked 10001. Prize money € 5,000

In addition, the Selection Committee awards recognition to the following proposals:

Recognition, proposal no. 2 – marked 01997. Prize money € 1,000
Recognition, proposal no. 3 – marked 11731. Prize money € 1,000
Recognition, proposal no. 41 – marked 30012. Prize money € 1,000
Recognition, proposal no. 50 – marked 38000. Prize money € 1,000
Recognition, proposal no. 51 – marked 05964. Prize money € 1,000

The Selection Committee regarding following proposals as especially interesting:

Proposal no. 11 – marked 35353.
Proposal no. 25 – marked 26540.
Proposal no. 33 – marked 28513.
Proposal no. 52 – marked 96833.
Proposal no. 56 – marked 80206.
Proposal no. 64 – marked 62578.
Proposal no. 66 – marked 12121.
Proposal no. 70 – marked 10001.
Proposal no. 72 – marked 21176.
Proposal no. 79 – marked 17717.
Proposal no. 82 – marked 12066.

After the completion of the Selection Committee's final meeting on 16 April, the confidant was summoned, and anonymity was lifted.

Reykjavík, 16 April 2008

The members of the Selection Committee confirm with their signatures their judgment for each individual proposal and the committee's conclusion.

Thórdur Gudmundsson, President and CEO of Landsnet hf., Chairman of the Selection Committee

Árni Stefánsson, Technology and Assets Manager of Landsnet hf

Rolv Geir Knudsen, former Managing Director of Statnett's Technical Department

Jes Einar Thorsteinsson, architect FAÍ

Örn Thór Halldórsson, architect FAÍ

Tillaga 1 merkt 16076

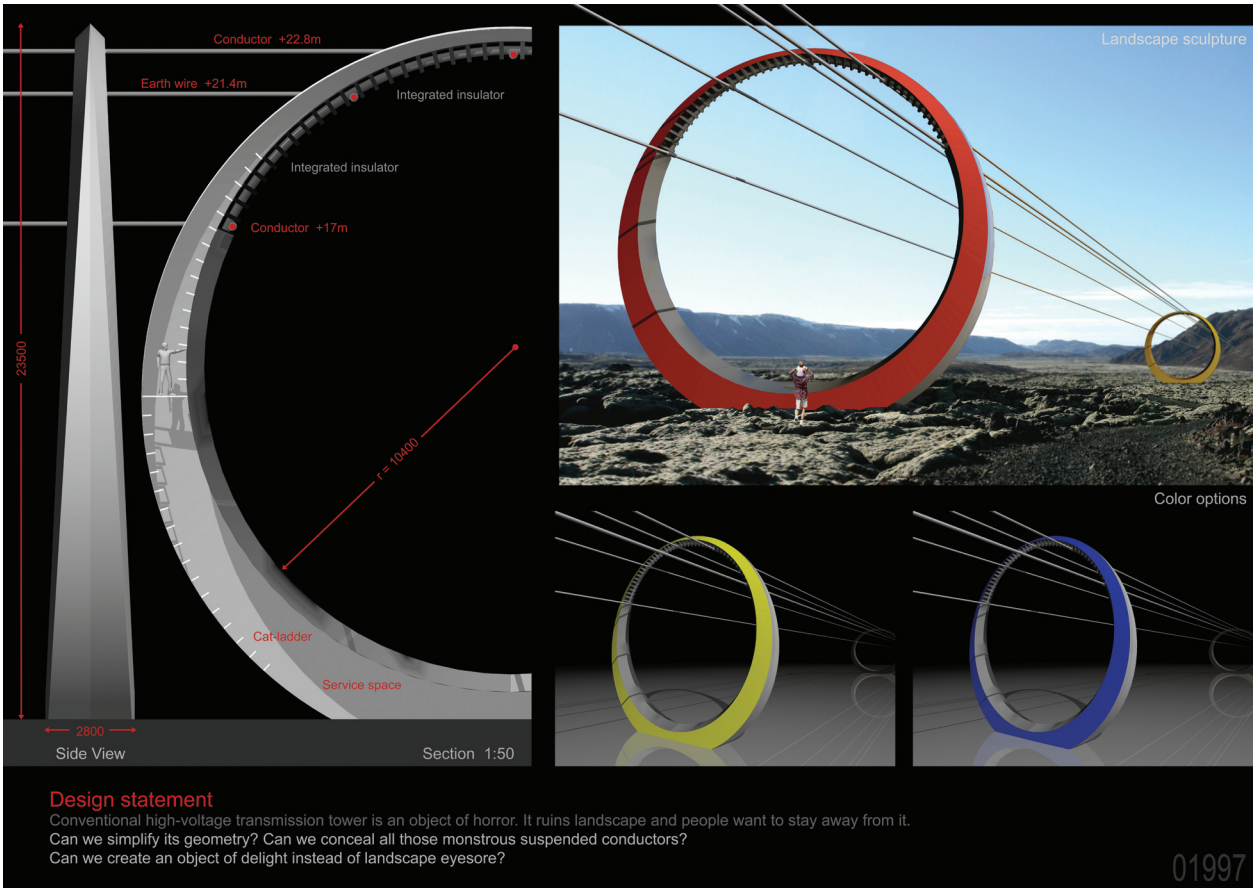
Buro Happold Engineers. England
Andrea Menardo, Dott.Ing. CEng MIStructE
AKT. England
Carlo Diaco, Dott.Ing.
Ráðgjafi:
RFR Paris: Athena Papdopoulou, arkitekt. Frakkland
England/Frakkland

Góð og skýr framsetning. Sterk formsköpun á völdum stöðum og færi vel í landslagi. Verkið vel byggt upp. Sláin fellur vel að voldugu burðarmastri. Eitt sér gæti verkið staðið á völdum stöðum en sem samfelld röð í línu kæmi verkið ekki til greina.
Tæknileg umsögn: Innra burðarvirki þarf að þróa og þverslá verður efnismeiri og þar með meira áberandi. Fyrirkomulag leiðara og einangrara er með hefðbundnum hætti, þ.e. lárétt uppröðun með hengikeðjum. Jarðvírar eiga ekki að vera í hengikeðjum.

Good and clear presentation. Strong conception of form at selected sites, fitting well with the landscape. The structure is well composed. The crossbar blends well with a powerful support tower. The structure per se could stand at selected sites, but the structure would not be considered in a continuous line.
Technical opinion: The internal support structure needs development, and the crossbar will be sturdier and thereby more noticeable. The arrangement of the power lines and insulators is traditional, i.e., horizontal arrangement with suspension sets. Ground wires should not be in suspension sets.

Tillaga 2 merkt 01997
Viðurkenning

Tony Leung
Hong Kong



Einföld, nýstárleg og sterk tillaga. Býður upp á víðtæka möguleika á að undirstrika línuleiðir á völdum stöðum.
Tæknileg umsögn: Einangrunarkerfi er ekki raunhæft og þarf því að þróa áfram hvernig leiðarar fara í gegnum mastrið og eru einangraðir frá því. Burðarvirki þarf einnig að þróa.

Simple, innovative and strong proposal. Offers extensive possibilities for emphasizing line routes in selected locations.
Technical opinion: The insulation system is not realistic and must therefore be further developed as to how power lines go through the tower and are not isolated from it. The support structure also requires development.

Tillaga 3 merkt 11731
Viðurkenning

Hornsteinar arkitektar ehf.
Grafísk hönnun: Friðrik Snær Friðriksson
Ísland

Mjög góð framsetning. Vel mótuð möstur sem sannfærandi burðarvirkislína. Stæði sjónrænt vel í umhverfi.
Tæknileg umsögn: Tæknilega þróuð lausn

Very good presentation. Towers well formulated as a convincing line support structure. It would fit well into the environment visually.
Technical opinion: Technically developed solution.

Tillaga 4 merkt 31278

ennevi Design
Andrea Nicholas Vendramin
Hue Nguyen
Bandaríkin

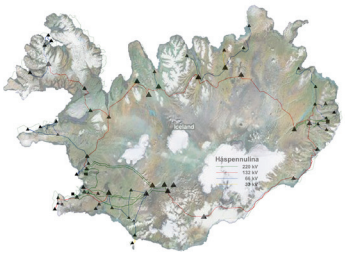
Proposal for High Voltage Transmission Line Towers

Landmarks, sun path and constellation serve as key elements in providing a mean of path finding and reference from the sky and visual perception. The high voltage transmission towers composed of steel structure in Iceland span through vast landscape, connecting individual residential area, towns and cities together while providing a common form that unifies the various typologies from mountainous regions to flat land to undeveloped land. In its exuberant form, the steel structures' presence can be part of the landscape instead of being an independent object that provides power.

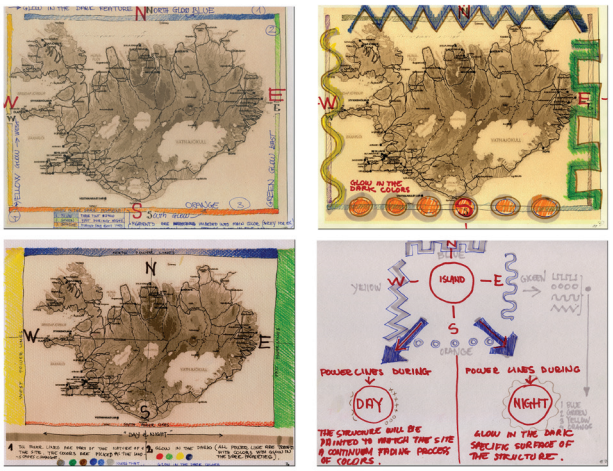
In this proposal, the shape and structure of the tower is selected from existing references and given another meaning and form to its relationship to nature. We recommend to integrate the existing and new transmission towers independent of shape and type to become an element in the ever active landscape that undergo seasonal and daylight changes. The structural typology, whether it is angle steel tower, tension tubular poles, tubular lattice tower and linear y-shape crossing tubular steel pole remain very static in their form and relationship to the surrounding. We suggest keeping the existing structural forms and applying glow in the dark oil based paint with the color variation depending on the region the towers are in. For example, in mountainous areas, the structure should be painted shades of green whereas more open earth landscape is painted orange.
To give the perception of movement among the group of towers, the paint applied will be gradients of the same color so that at any point in view the shade of the paint color will transition from light to dark or vice versa. The goal seeks to integrate the form into its landscape for a continuous reading while the change in daylight will affect the appearance.

The application of this oil based glow in the dark paint, which has its own color pigment embedded independent of the actually visual color in the daylight, becomes subtlety activated at night with a glow similar to the stars. To avoid light pollution and redundancy, only strategic areas are being painted with the glow in the dark paint to light up at night to become a sculptural form. Four different glow in the dark colors will be applied to the four segment of the country demarcated by the cardinal direction. North being a colder region than the rest of the country would have the color blue while the warmer south towers will be painted an orange paint. Towers in the east and west regions of the country being green and yellow accordingly.

As an urban planning strategy, this will connect the towers with the landscape. By keeping the existing towers, they become more than just an object that transmit power but also a sculpture, beacon of dispersed light from the sky and landmark for cardinal direction. This simple elegant concept will transform the relationship between structure versus landscape and people perspective of the function of transmission line. It will literally give Iceland a secondary constellation from an aerial view and distinct the skyline at nightfall.



OVERLAY OF TOPOGRAPHY OVER TRANSMISSION LINE MAP



CONCEPT SKETCHES

VIEW OF TOWERS DURING DAYLIGHT

VIEW OF TOWERS AT NIGHT

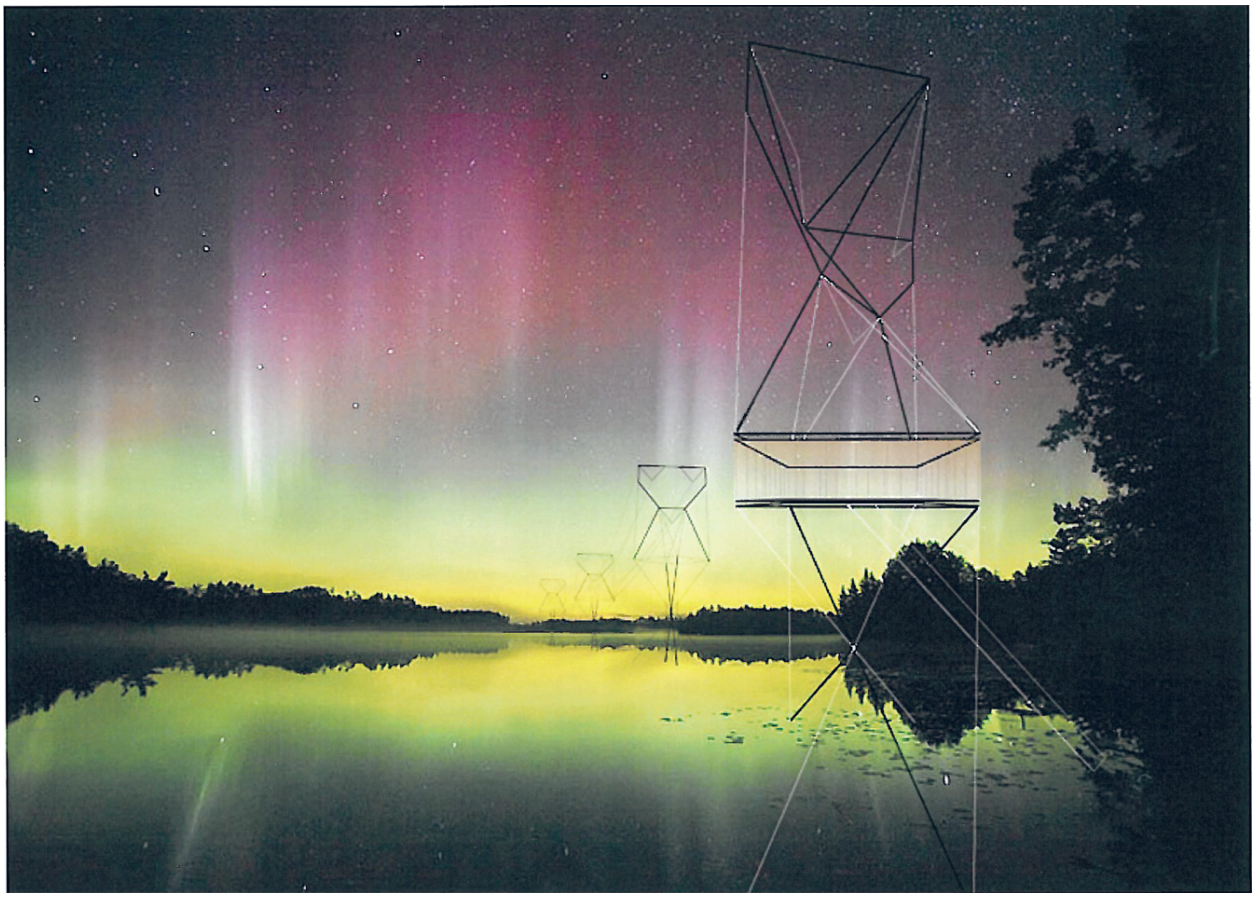
31278

Áhugavert innlegg en þekkt mastursgerð. Breytt umhverfisáhrif umbúða með aukinni litadýrð í landslagi.

Interesting input but unknown type of tower. Changed environmental impact of packaging with increased colourfulness of the landscape.

Tillaga 5 merkt 97351

Jorge Alvarez-Builla Carrillo, architect, ETSAM
Jorge Archilla Martín-Sanz, engeneer, ICAI
Spánn

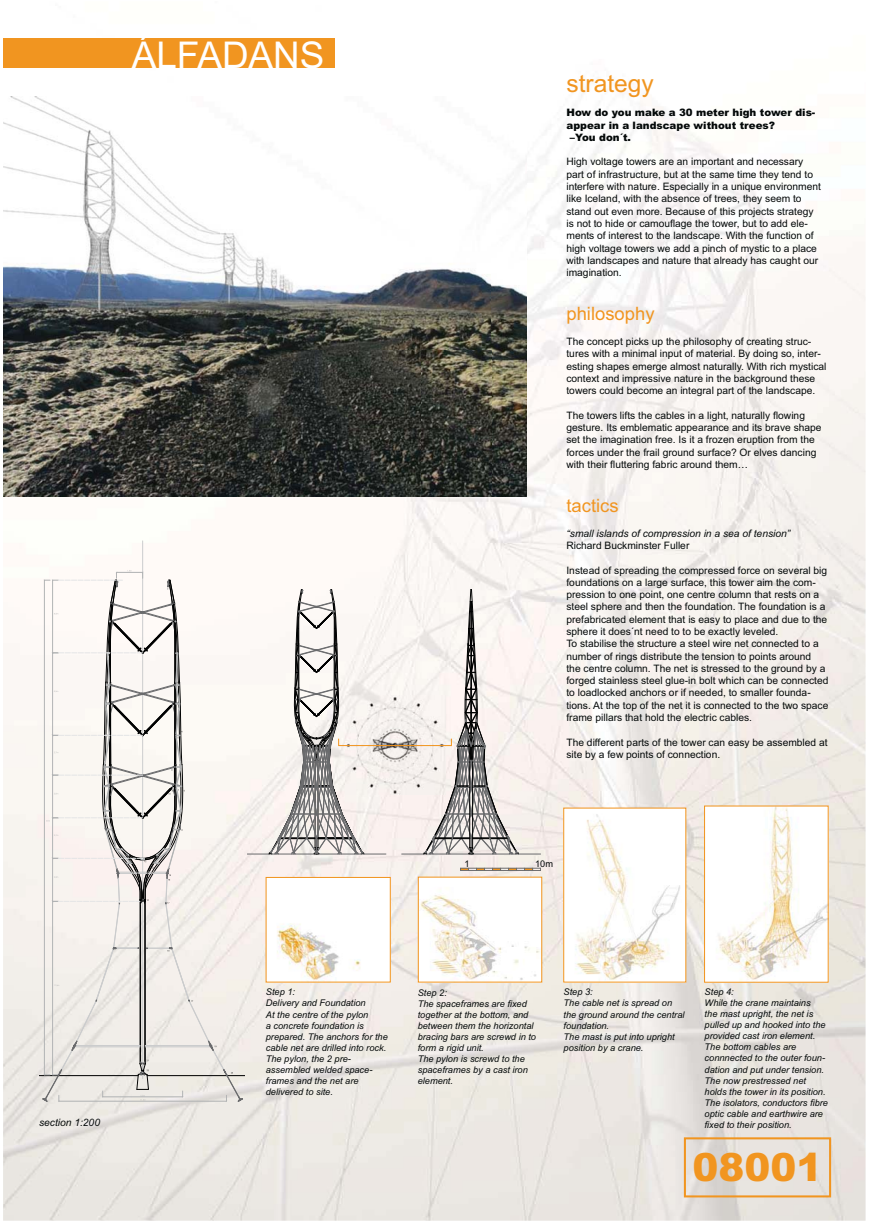


Afar fínleg og nýstárleg flétta við gerð mastra. Færi vel í landslagi en nokkuð flókið burðarvirki.
Tæknileg umsögn: Burðarvirki þarf að þróa mikið áður en þetta telst raunhæf lausn. Einnig þarf að þróa betur hvernig leiðarar eru hengdir upp með tilliti til fjarlægða í burðarvirki.

Very delicate and innovative intertwining of tower types. Would fit well into the landscape, but a somewhat complex support structure.
Technical opinion: The support structure requires a great deal of development, but this is deemed a realistic solution. Better development is also needed of how power lines are hung with regard to distances in the support structure.

Tillaga 6 merkt 08001

GOA-studio
David Josefsson, Svíþjóð
Manuel Hauer, Þýskaland

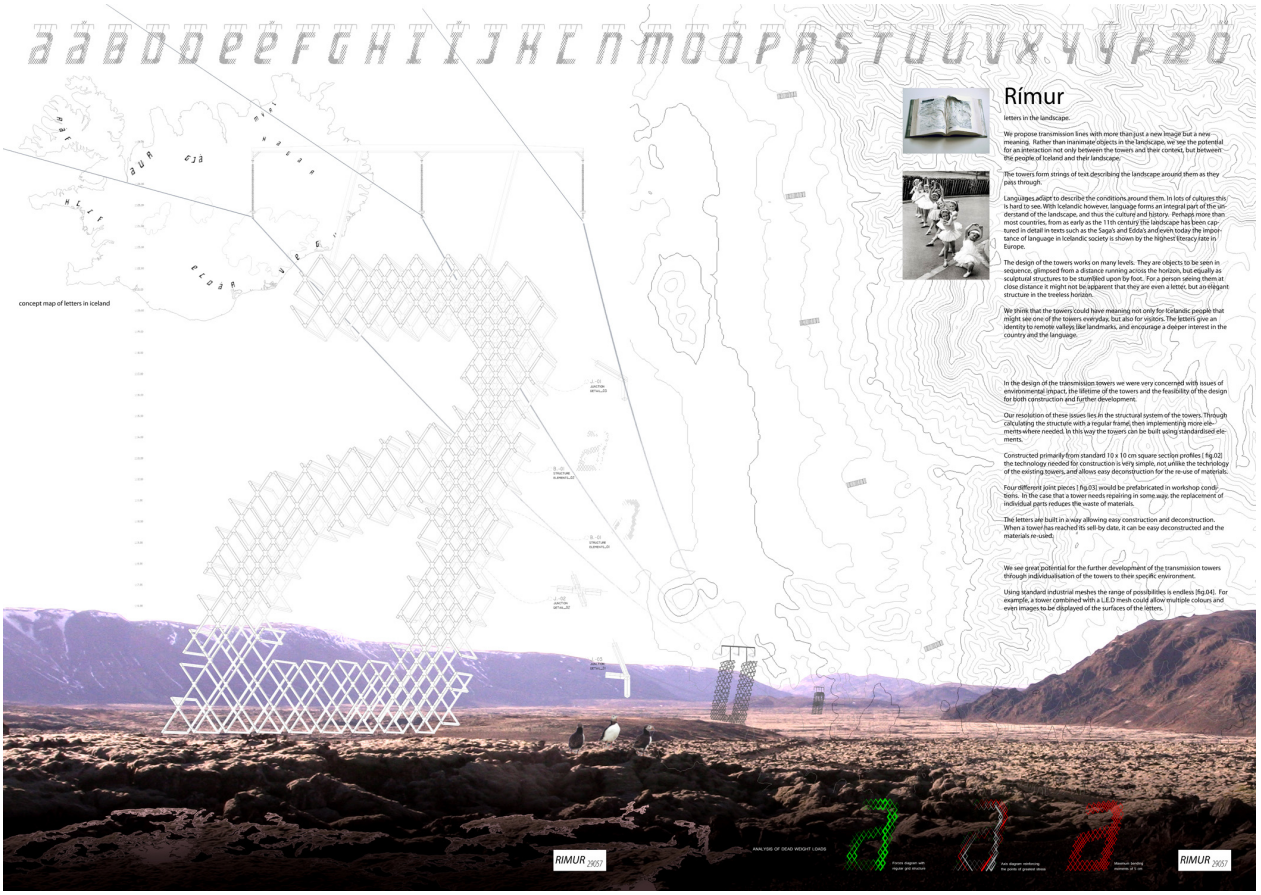


Áhugaverð flétta með spennu og gegnsæi en ekki sannfærandi varðandi inngrip í umhverfi.
Tæknileg umsögn: Tæknilega leysanlegt.

Interesting interplay of tension and transparency but not convincing regarding intervention in the environment.
Technical opinion: Technically solvable.

Tillaga 7 merkt 29057

Theodore Molloy
Marina Rocarols
Spánn

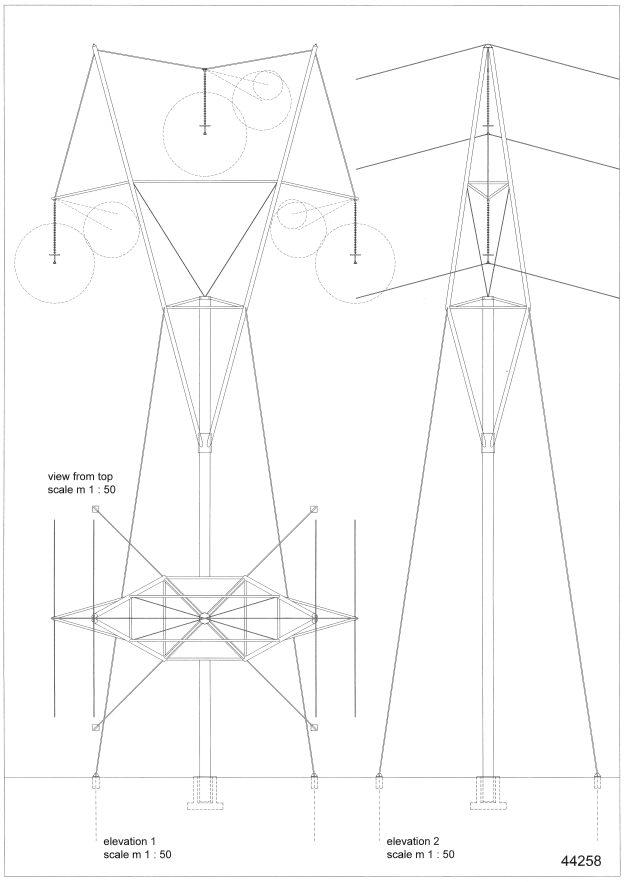


Léttleiki sem höfundur leitar eftir líður fyrir ósannfærandi tengingu við gálgafestingu lína.
Tæknileg umsögn: Burðarvirki þarf að þróa verulega ef á að ná fram þeim sjónrænu áhrifum sem leitast er eftir.

The lightness sought by the author suffers from an unconvincing connection with the lines' L- fastening.
Technical opinion: The support structure requires considerable development if it is to achieve the visual impact sought.

Tillaga 8 merkt 44258

Berhold Rosewich, Prof. Dipl.-Ing. Architekt BDA DWB
Rosemarie Wagner, Prof. Dr. Ing.
Þýskaland

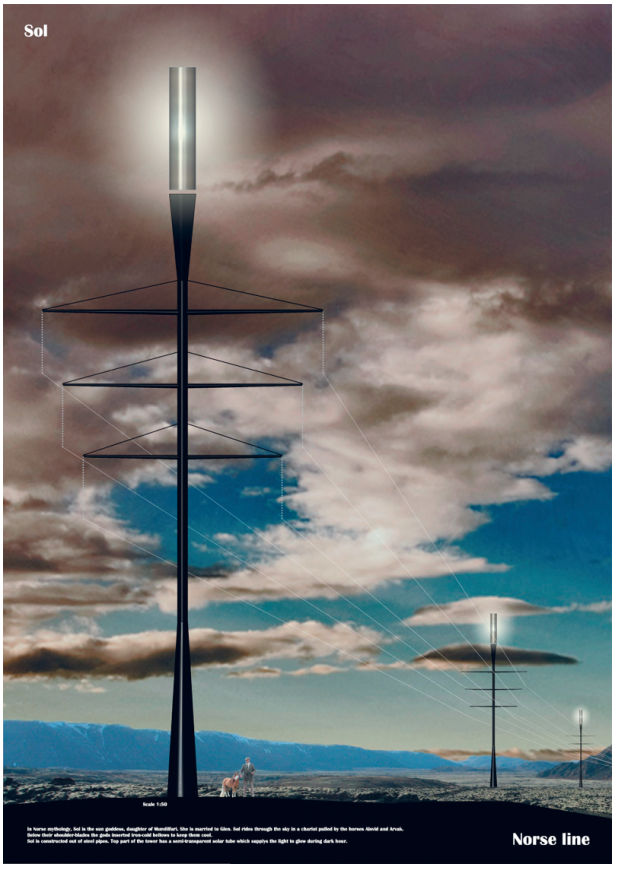


Tillagan líður fyrir óskýra framsetningu en sýnir trúverðugan léttleika í tæknilegri útfærslu.
Tæknileg umsögn: Tæknilega leysanlegt en burðarvirki þarf að þróa frekar. Upphengi leiðara er í þríhyrning, sem leiðir til minna rafsegulsviðs en lárétt uppröðun.

The proposal suffers from unclear presentation but shows credible lightness in technical implementation.
Technical opinion: Technically solvable, but the structure needs further development. The power lines are hung in a triangle, resulting in a smaller electromagnetic field than a horizontal arrangement.

Tillaga 9 merkt 73829

FarmStudio.info
Max Lönnqvist, arkitekt m.sc.
Svíþjóð

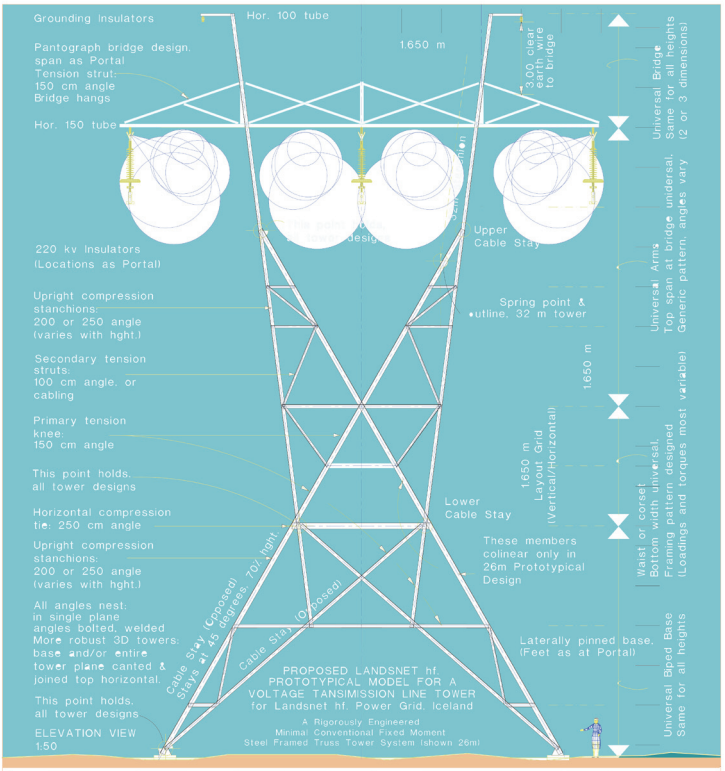


Tvær athyglisverðar tillögur sem þó eru all ólíkar burtséð frá vísan þeirra í norræna goðafræði. Yggdrasill bætir úr meintum skorti á trjám á Íslandi og Sól lýsir í skammdeginu. Útfærslu skortir á einangrunarkerfi.
Tæknileg umsögn: Yggdrasils-tillöguna þarf að þróa frekar, ekki síst á sviði efnisfræði þar sem burðarvirki og einangrun mynda eina heild. Sol-tillagan er mjög hefðbundin.

Two interesting proposals that are nevertheless fairly different despite their reference to Nordic mythology. Yggdrasil remedies an alleged shortage of trees in Iceland, and Sun lights up the short days of winter. Implementation lacks an insulating system.
Technical opinion: The Yggdrasil proposal needs further development, not least in the field of metallurgy since the support structure and insulation form a whole. The Sol proposal is very traditional.

Tillaga 10 merkt 12305

Stephen Synakowski Architects and Planners
Stephen Synakowski, NCARB Architect
Bandaríkin

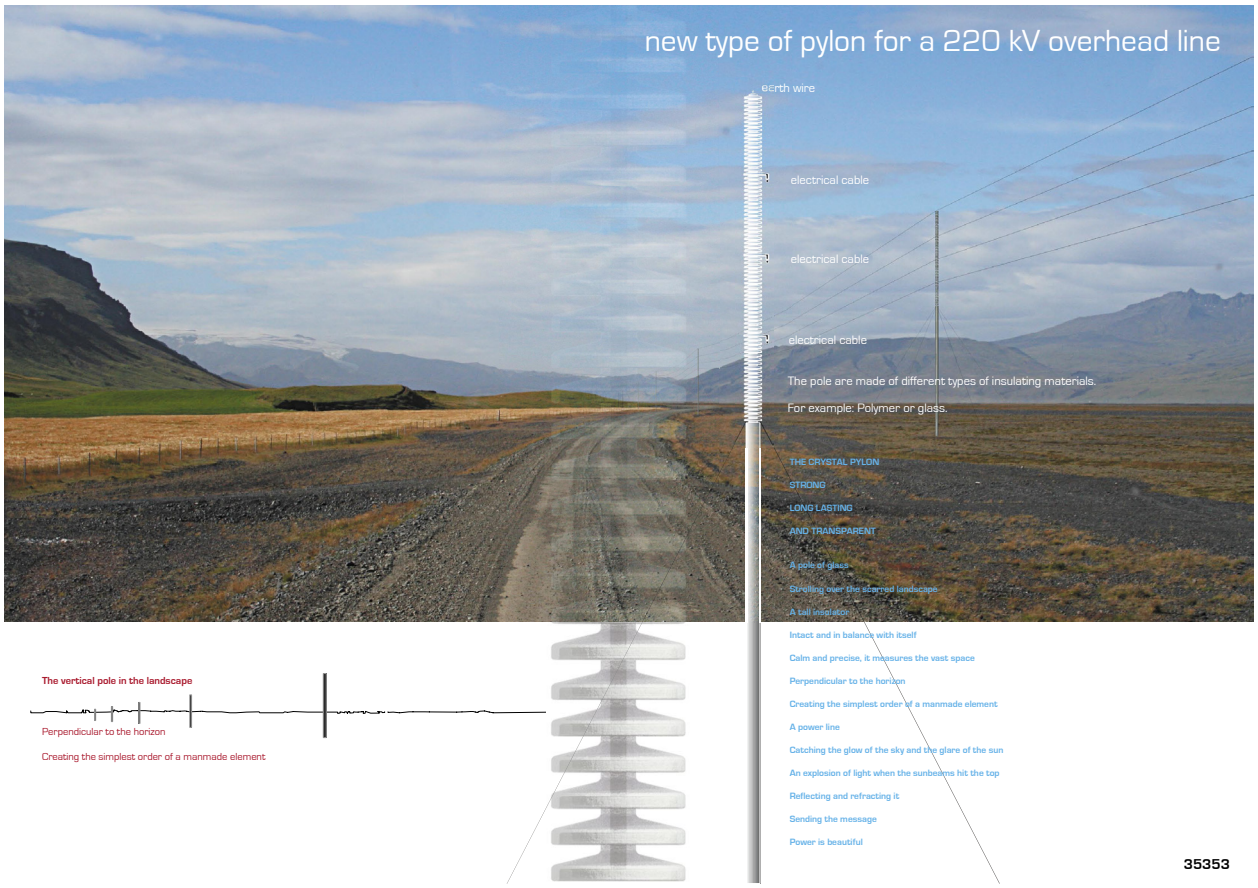


Án mikillar nýbreytni, að öðru leyti vel útfærð og sannfærandi.
Tæknileg umsögn: Hefðbundið burðarkerfi masturs sem þó gengur ekki vel upp án frekari þróunar.

Without much innovation, otherwise well implemented and convincing.
Technical opinion: A traditional support system for the tower that will nevertheless not work without further development.

Tillaga 11 merkt 35353
Athyglisverð tillaga

BYSTRUP ARCHTECTS AND DESIGNERS
Burðarþol: Ramboll A/S, Ulrick Støttrup Andersen
Vindur: Svend Ole Hanse
Efnisval: Richard Aagaard
Danmörk



Einkar vel fram sett tillaga. Væri tæknilega unnt að framkvæma þessa mastragerð væri um að ræða byltingarkennda lágmörkun umhverfisáhrifa háspennulínumastra.
Tæknileg umsögn: Til að mastrið uppfylli raffræðilegar kröfur þarf kjarninn að vera gerður úr einangrandi efni. Í dag er ekki mögulegt að framleiða nægilega sterkan kjarna með tilliti til þess styrkleika sem þörf er á vegna áraunar sem reikna þarf með.

Especially well-presented proposal. If it were technically possible to implement this type of tower, it would involve a revolutionary minimization of the environmental impact of high-voltage line towers.
Technical opinion: For the tower to fulfil electrical requirements, the core must be made of insulating material. Today it is not possible to manufacture a sufficiently strong core with respect to the strength required for the stress that must be expected.

Tillaga 12 merkt 11255

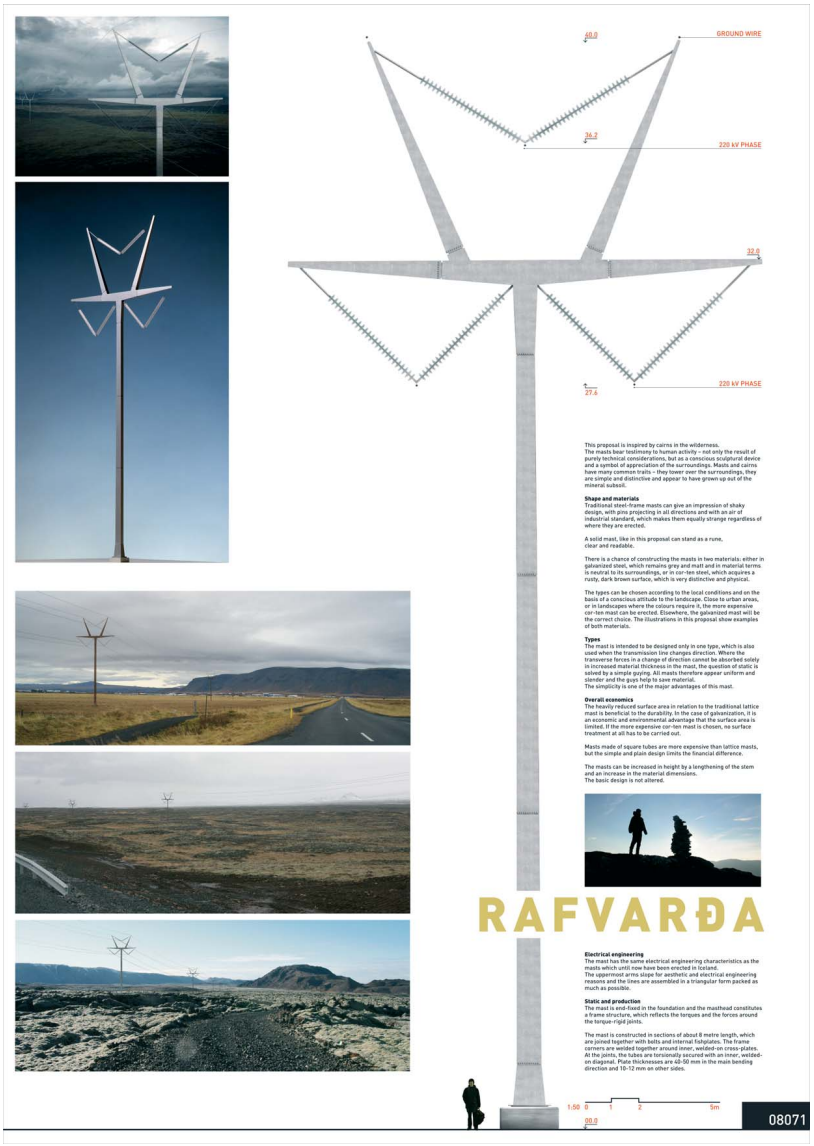
Vassilis Alymaras, architect
Grikkland

Mjög falleg framsetning. Áhugaverð hugmynd sem gæti staðið ein með léttari möstrum.
Tæknileg umsögn: Ekki tekið á raunhæfri útfærslu einangrara.

Very pretty presentation. An interesting idea that could work by itself with lighter towers.
Technical opinion: A realistic implementation of insulators was not addressed.

Tillaga 13 merkt 08071

Gottlieb Paludan A/S
Verkefnisteymið: Jesper Gottlieb, Michael Stabell, Michael Cederfeldt, Sten Sødring, Jesper Ravn
Verkfræðingur: Ole Vanggaard
Módelsmíði: Lars Rothenborg
Danmörk

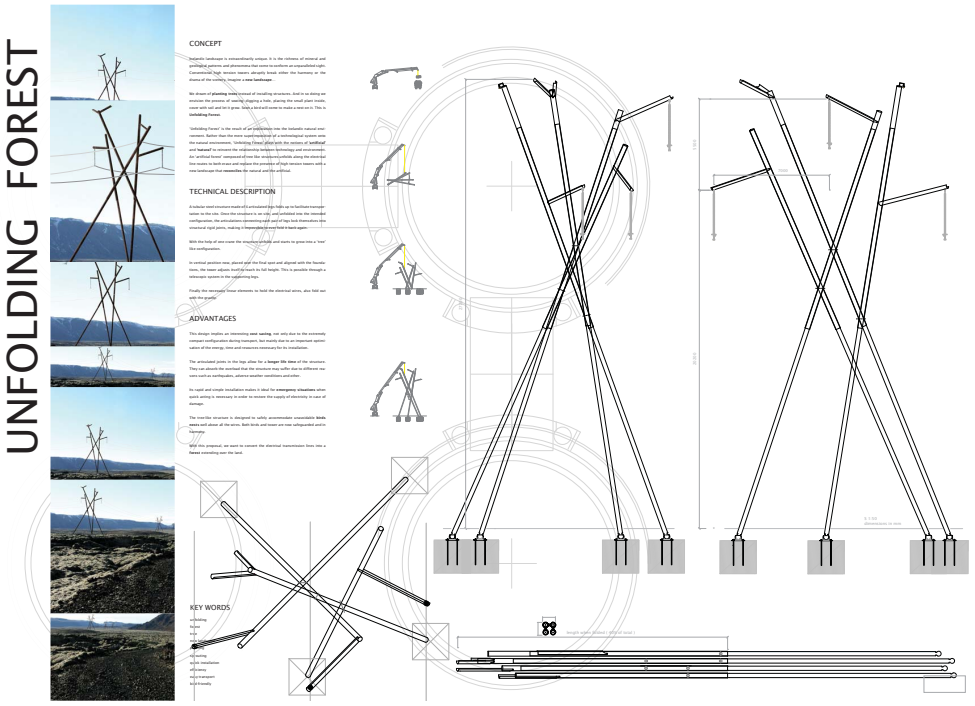


Einföld, skýr hugmynd og vel fram sett. Þekkt mastragerð án mikilla nýjunga.
Tæknileg umsögn: Hefðbundið burðarvirki

A simple, clear idea that is well presented. A known type of tower without much innovation.
Technical opinion: Traditional support structure.

Tillaga 14 merkt 35434

Mercedes Rodrigo Garcia
Marta Rois Diaz
Spánn

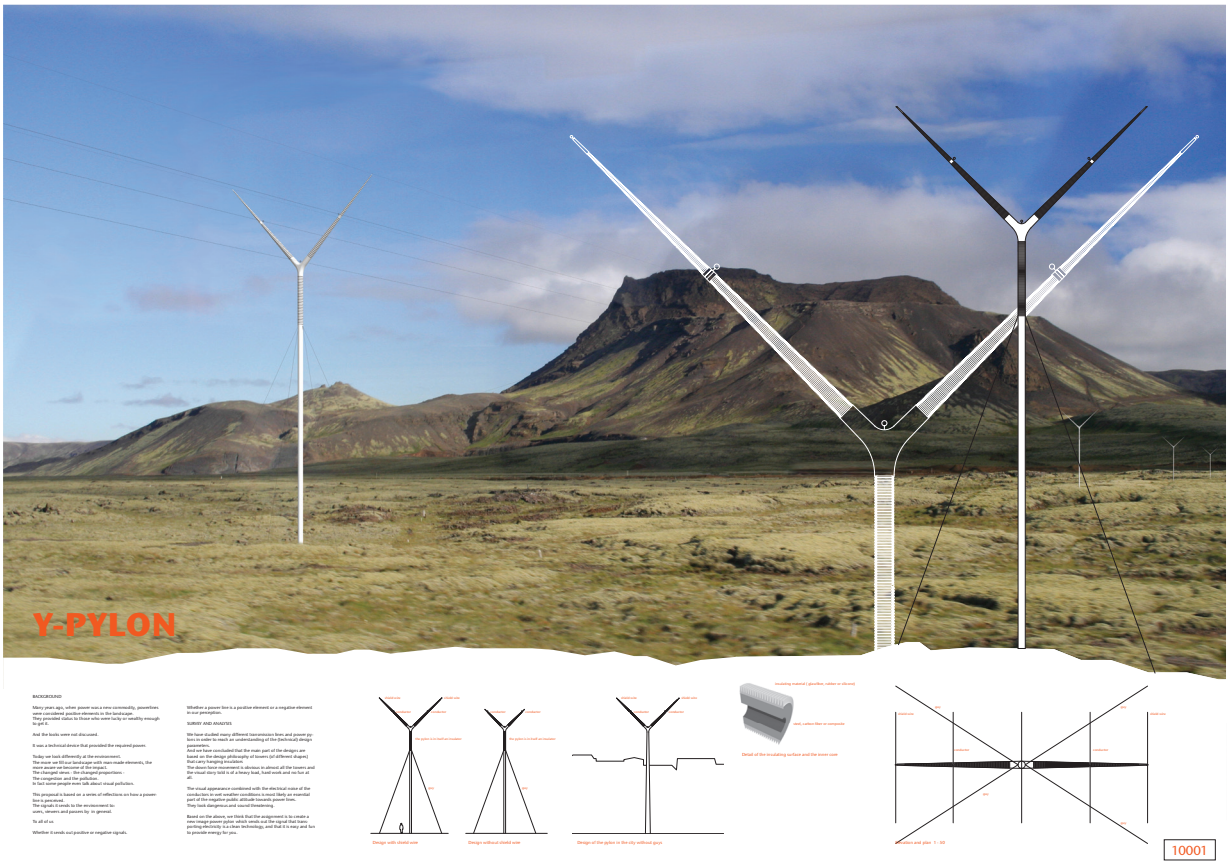


Athyglisverð og óvenjuleg nálgun. Megin áhersla tillögunnar er uppsetning mastranna og henni líkt við gróðursetningu. Þó að ytra form sé nokkuð frumstætt er hér um mjög þróaða og nútímalega tillögu að ræða. Umhverfisáhrifin eru jákvæð.
Tæknileg umsögn: Burðarvirkið er ekki úthugsað

An interesting and unusual approach. The main emphasis of the proposal is installation of the towers, which is likened to planting. Although the external form is somewhat primitive, a very developed in modern proposal is involved. The impact on the environment is positive.
Technical opinion: The support structure has not been thought out.

Tillaga 15 merkt 10001
3. verðlaun

BYSTRUP ARCHTECTS AND DESIGNERS
Burðarþol: Ramboll A/S, Ulrick Støttrup Andersen
Vindur: Svend Ole Hanse
Efnisval: Richard Aagaard
Danmörk

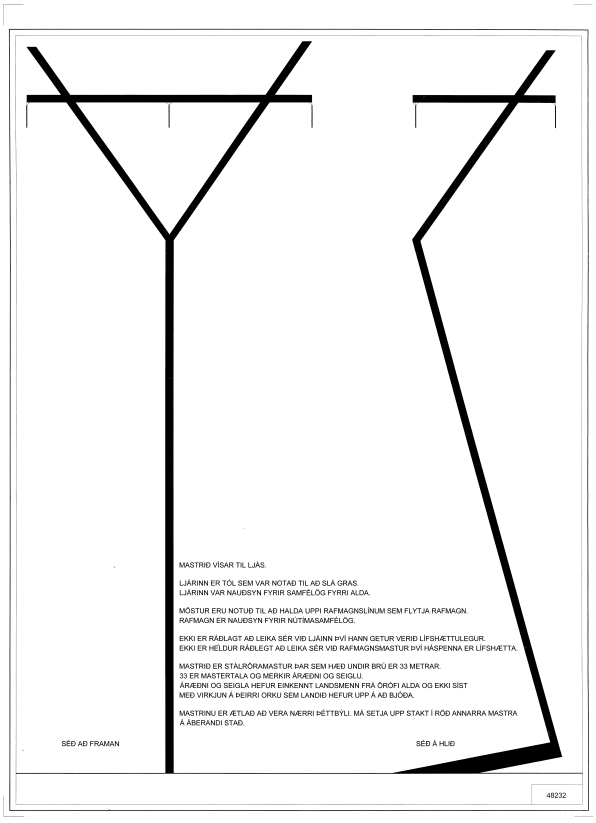


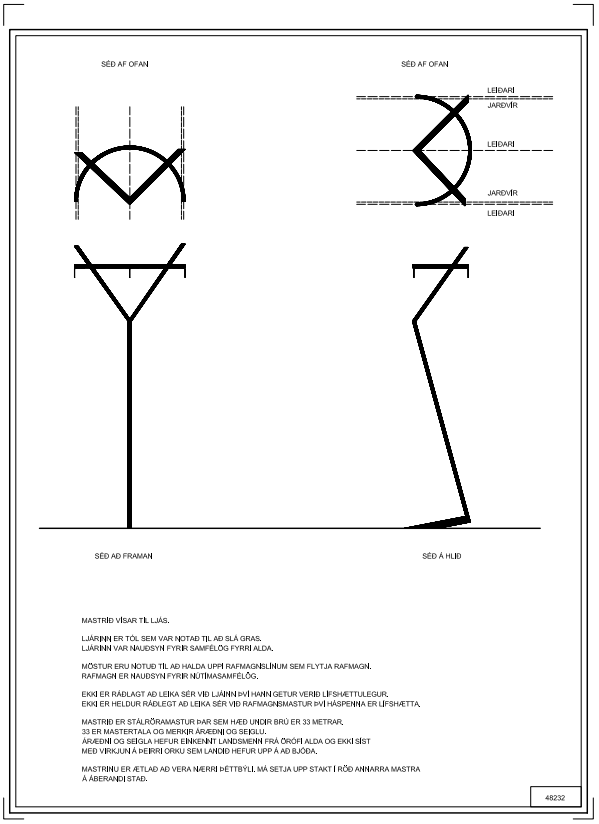
Einstaklega vel útfærð tillaga. Tillagan gerir ráð fyrir að einangrarar nýtist sem hluti af burðarvirki. Slíkt fyrirkomulag hefði byltingarkennd áhrif á þróun háspennulínumastra. Gengur tæplega upp tæknil¬ega hvað varðar útfærslu einangrara.
Tæknileg umsögn: Til að mastrið uppfylli raffræðilegar kröfur þarf kjarninn að vera gerður úr einangrandi efni. Í dag er ekki mögulegt að framleiða nægilega sterkan kjarna með tilliti til þess styrkleika sem þörf er á vegna áraunar sem reikna þarf með.

An especially well implemented proposal. The proposal provides for the insulators being utilized as part of the support structure. Such an arrangement would have a revolutionary impact on the development of high-voltage line towers. Falls technically short regarding implementation of insulators.
Technical opinion: For the tower to meet electrical requirements, the core must be made of insulating material. Today it is not possible to manufacture a sufficiently strong core with respect to the strength required for the stress that must be expected.

Tillaga 16 merkt 48232

Verkfræðistofa Árborgar ehf.
Marco Gouivea
Samstarfsmaður: T. Ellert Tómasson
Ísland



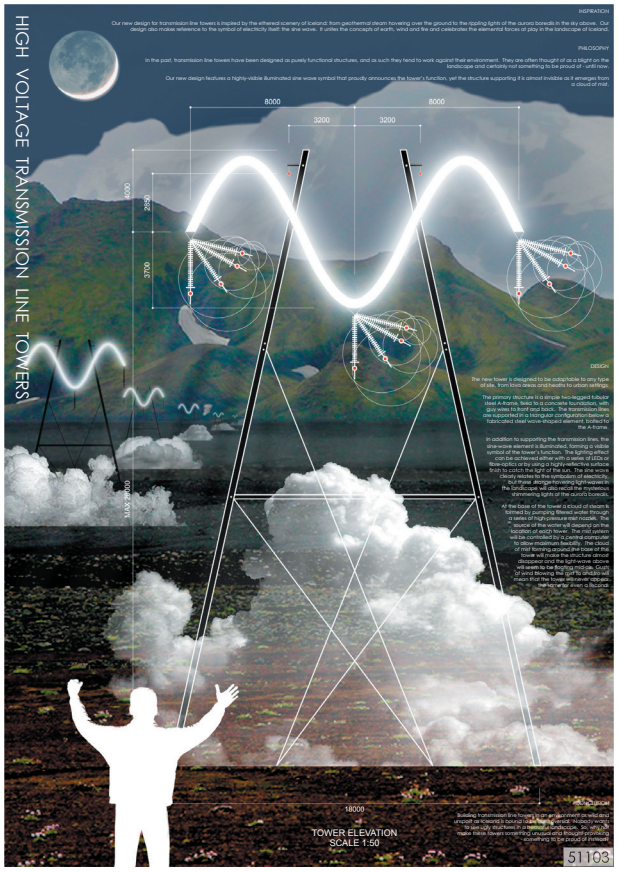


Einföld og nokkuð frumleg hugmynd. Framsetning óskýr. Óvíst um endanlegt útlit við frekari útfærslu.
Tæknileg umsögn: Vinna má áfram með burðarvirki.

A simple and somewhat original idea. Unclear presentation. The final appearance after further implementation is uncertain.
Technical opinion: Work could continue on the support structure.

Tillaga 17 merkt 51103

Mike Hyatt Landscape Architects
Skotland



LANDSNET competition

HIGH VOLTAGE TRANSMISSION LINE TOWERS

INSPIRATION

Our new design for transmission line towers is inspired by the ethereal scenery of Iceland: from *geothermal steam* hovering over the ground to the *rippling lights* of the aurora borealis in the sky above. Our design also makes reference to the symbol of electricity itself: the sine wave. It unites the concepts of earth, wind and fire and celebrates the elemental forces at play in the landscape of Iceland.

PHILOSOPHY

In the past, transmission line towers have been designed as purely functional structures, and as such they tend to work against their environment. They are often thought of as a blight on the landscape and certainly not something to be proud of - until now.

Our new design features a highly-visible illuminated sine wave symbol that proudly announces the tower's function, yet the structure supporting it is almost invisible as it emerges from a cloud of mist.

DESIGN

The new tower is designed to be adaptable to any type of site, from lava areas and heaths to urban settings.

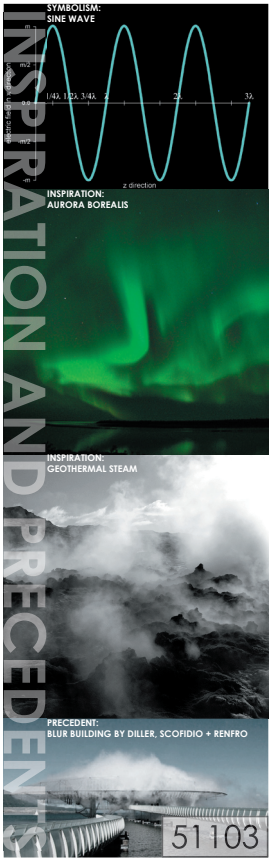
The primary structure is a simple two-legged tubular steel A-frame, fixed to a concrete foundation, with guy wires to front and back. The transmission lines are supported in a triangular configuration below a fabricated steel wave-shaped element, bolted to the A-frame.

In addition to supporting the transmission lines, the sine-wave element is illuminated, forming a visible symbol of the tower's function. The lighting effect can be achieved either with a series of LEDs or fibre-optics or by using a highly-reflective surface finish to catch the light of the sun. The sine wave clearly relates to the symbolism of electricity, but these strange hovering light-waves in the landscape will also recall the mysterious shimmering lights of the aurora borealis.

At the base of the tower a cloud of steam is formed by pumping filtered water through a series of high-pressure mist nozzles. The source of the water will depend on the location of each tower. The mist system will be controlled by a central computer to allow maximum flexibility. The cloud of mist forming around the base of the tower will make the structure almost disappear and the light-wave above will seem to be floating mid-air. Gusts of wind blowing the mist to and fro will mean that the tower will never appear the same for even a second.

CONCLUSION

Building transmission line towers in an environment as wild and unspoilt as Iceland is bound to be controversial. Nobody wants to see ugly structures in a beautiful landscape. So, why not make these towers something unusual and thought-provoking - something to be proud of instead?

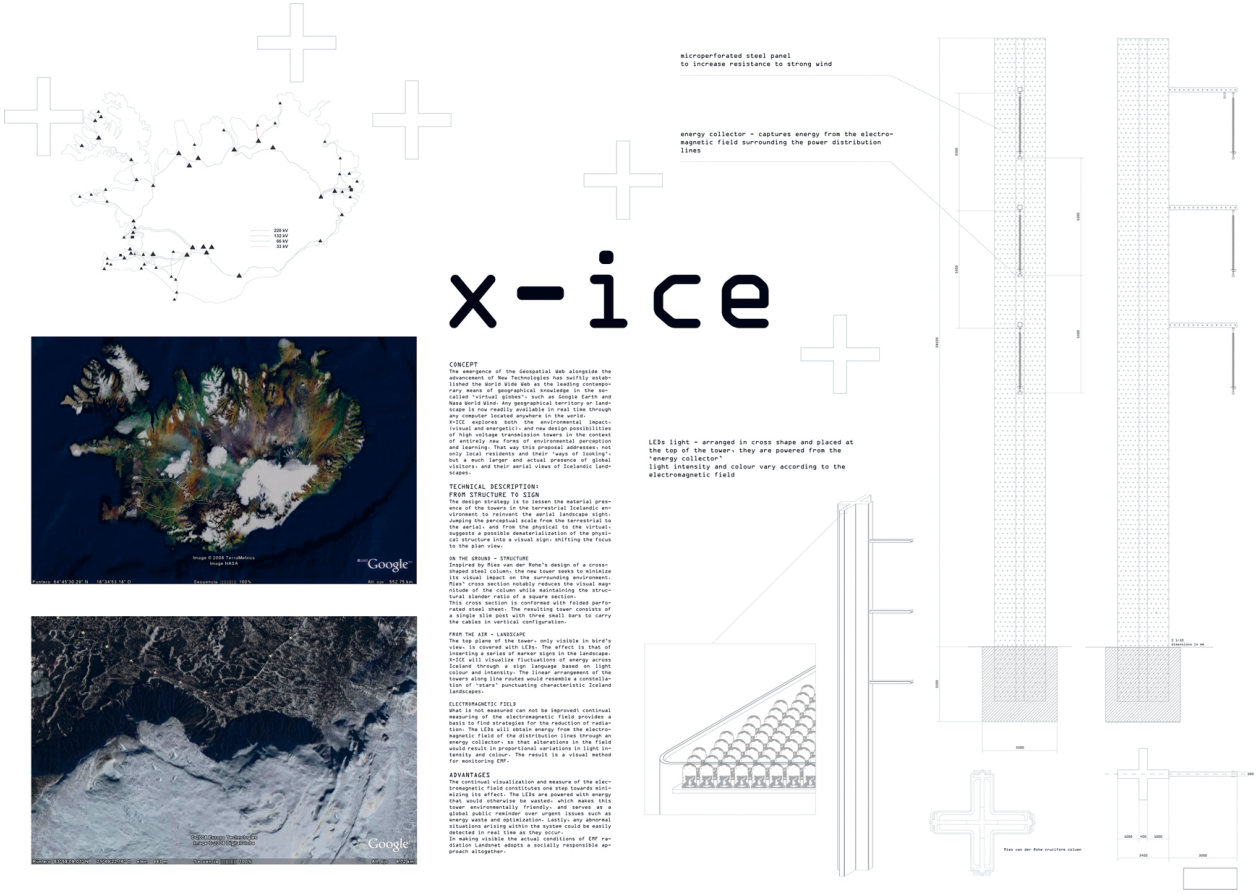


Áhugaverð hugmynd og listrænt tilbrigði við þekkta mastursgerð með frumlegi skírskotun til orku almennt. Nokkuð flókið samspil við umhverfi.
Tæknileg umsögn: Erfið burðarþolsútfærsla.

An interesting idea and artistic variation with a known type of tower, with a novel reference to energy in general. A somewhat complicated interplay with the environment .
Technical opinion: Difficult implementation regarding load bearing capacity.

Tillaga 18 merkt 08002

Marta Rois Diaz
Mercedes Rodrigo Garcia
Spánn

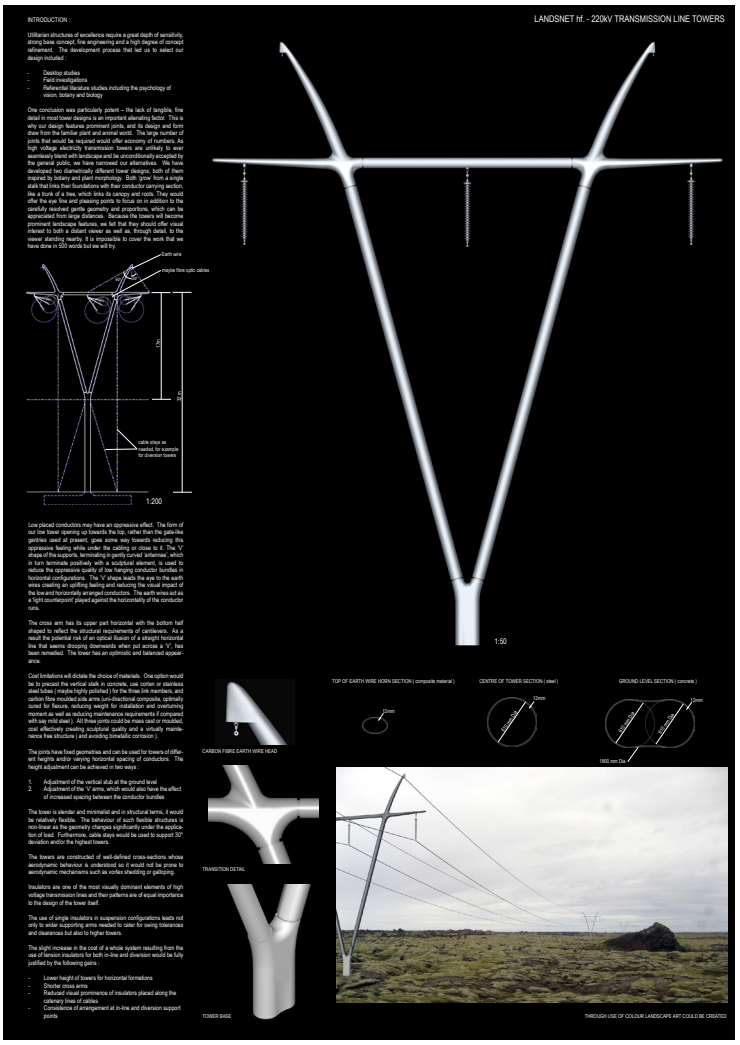


Snyrtilega framsett tillaga. Hugmynd með víðtækt og táknrænt inngrip í umhverið með því að gera möstrin að stóru umhverfislistaverki. Sjálf mastragerðin virkar þunglamaleg.
Tæknileg umsögn: Burðarvirkið þarf að þróa áfram. Upphengi einangrara þarf að breyta, m.a. til að koma í veg fyrir yfirslátt í mastur.

Neatly presented proposal. An idea with extensive and symbolic intervention in the environment by making the towers a large environmental work of art. The type of tower works as ponderous.
Technical opinion: The support structure requires further development. The suspension of insulators must be changed, among other things, to prevent outages in towers .

Tillaga 19 merkt 89683

STUDIO BEDNARSKI Ltd.
Arkitektar: Cezary M. Bednarski, Raffaele Damiano , Domenico Procopio
Burðarþolsverkfræðingur: Flint & Neill Partnership, London
England

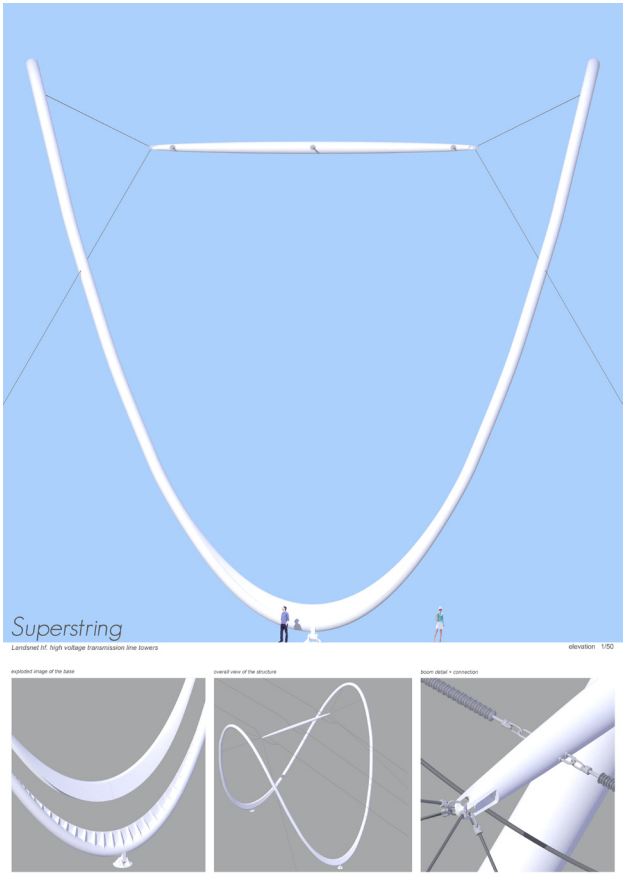


Mjög einföld og stílhrein tillaga. Þaulhugsuð niður í minnstu sérhluta og efnisval. Mjög raunhæf tillaga og hönnunarmarkmið virðast stefna á hagkvæmni í fjöldaframleiðslu. Straumlínulegt lag sómir sér vel í íslensku veðri.
Tæknileg umsögn: Hefðbundið fyrirkomulag leiðara og einangrara. Burðarvirki í lagi ef bætt er við stögum. Að öðrum kosti yrði efnisnotkun verulega meiri en sýnt er.

A very simple and cleanly styled proposal. Thoroughly thought-out down to the smallest separate part and selection of materials. A very realistic proposal, and the design goals appear to aim at efficiency of mass production. The streamlined shape is well suited to Icelandic weather.
Technical opinion: A traditional arrangement of power lines and insulators. The Support structure is satisfactory if guy wires are added. Otherwise, the use of material would be considerably more than shown.

Tillaga 20 merkt 25019
2. verðlaun

Shin Design
Yong-ho Shin
Suður Kórea

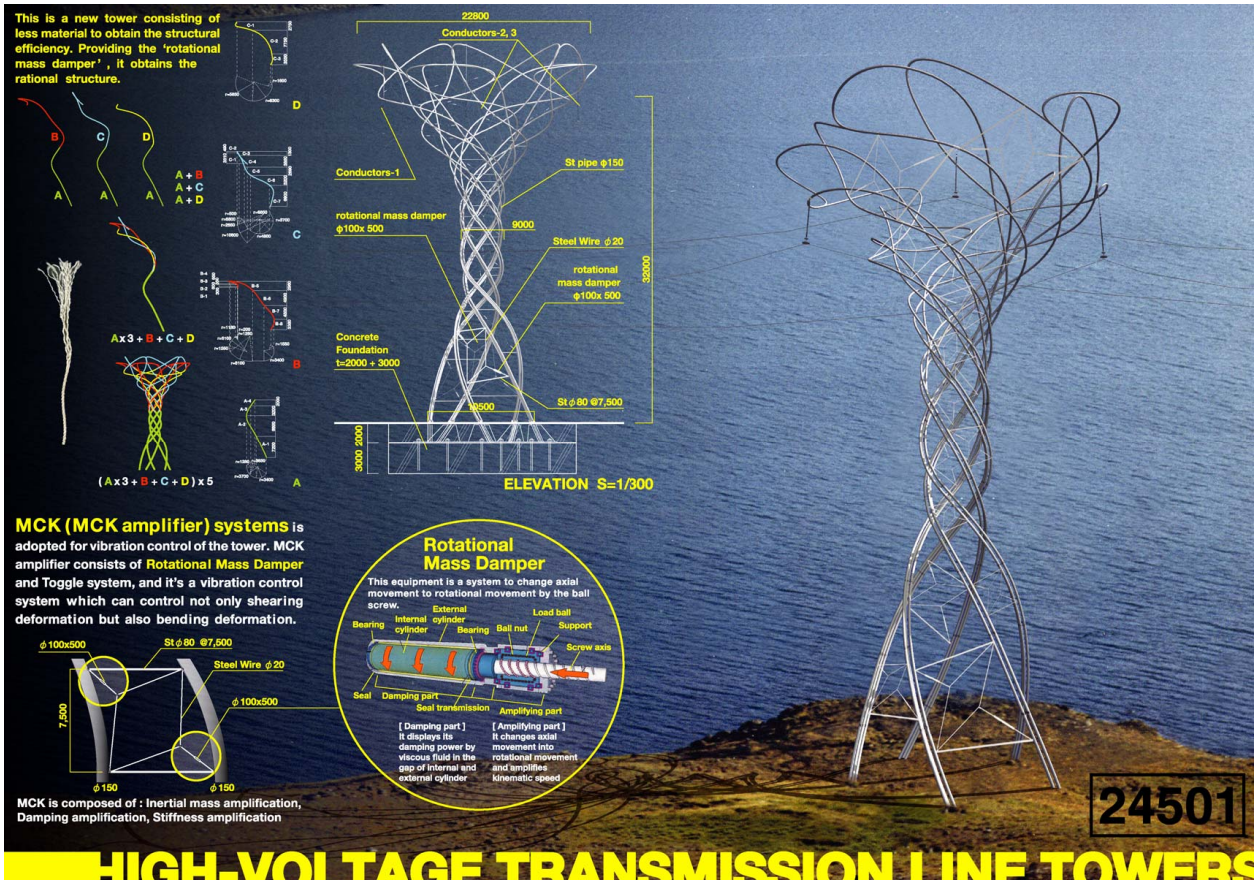


Mjög öflugt og nýstárlegt form burðarvirkis og hárfín tenging gálga við megin burðarvirki. Möstur þessi eru áberandi mannvirki sem hafa listrænt gildi.
Listræn útfærsla sem gæti staðið vel á afmörkuðum svæðum.
Tæknileg umsögn: Tæknilega framkvæmanlegt.

A very dynamic and innovative form of support structure and extremely exquisite connection between crossbars and the main support structure. These towers are prominent structures with artistic value. The artistic implementation could go well in demarcated areas.
Technical opinion: Technically doable.

Tillaga 21 merkt 24501

Shuhei Endo Architect Institute
Japan

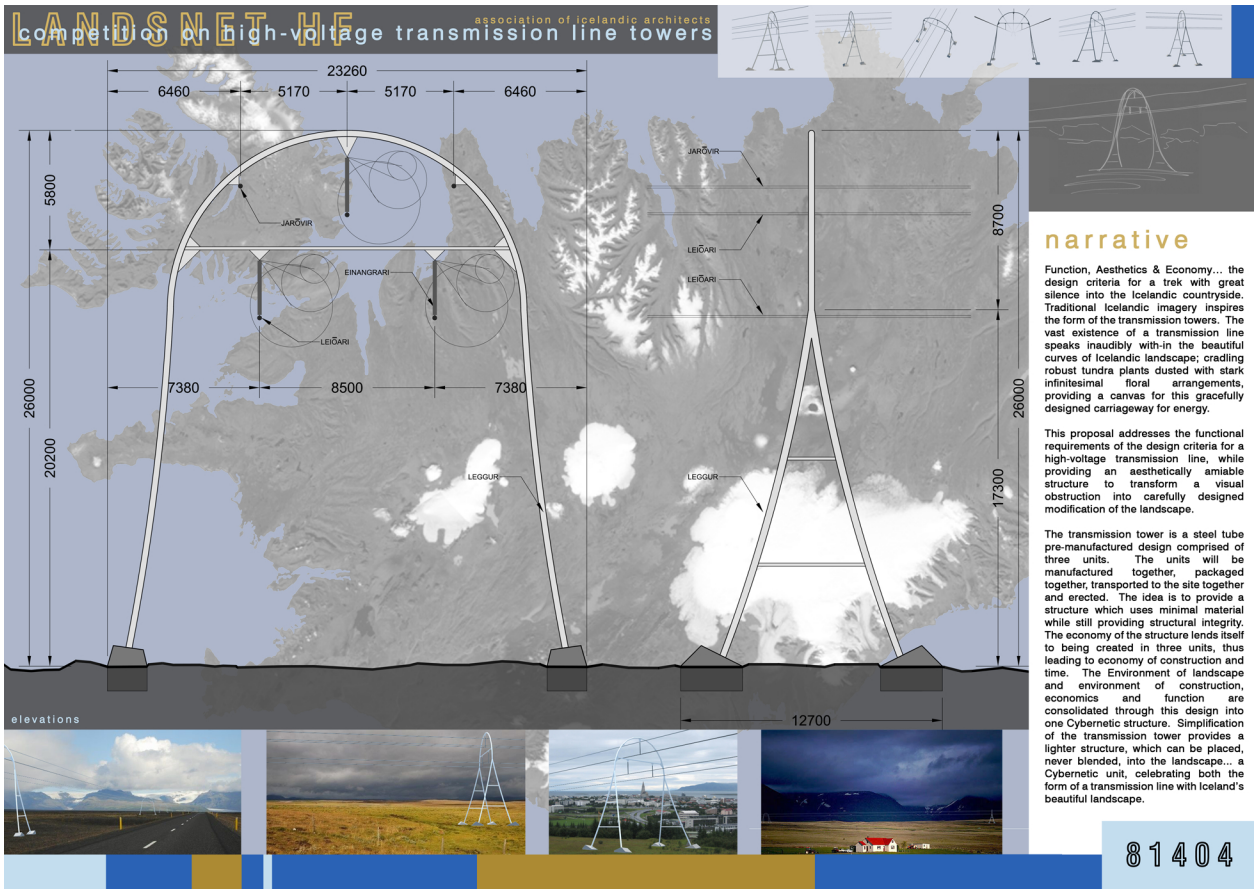


Tillagan virðist í fyrstu nokkuð flókin. Grunnhugmyndin virðist byggð á risastórri raflögn sem breytt er í burðarvirki sem stagað er og strekkt á einkar hugvitssaman hátt. Tillagan minnir á vafningsvið sem sprettur í léttri fléttu upp úr jörðinni.
Tæknileg umsögn: Tæknilega erfið lausn.

The proposal at first appears to be somewhat complicated. The basic idea seems to be based on an enormous electrical conduit that is transformed into a support structure with guy wires stretched in an especially innovative way. The proposal is reminiscent of ivy growing in a light braid from the earth.
Technical opinion: A technically difficult solution.

Tillaga 22 merkt 81404

Jason Anthony Gamache
Bandaríkin

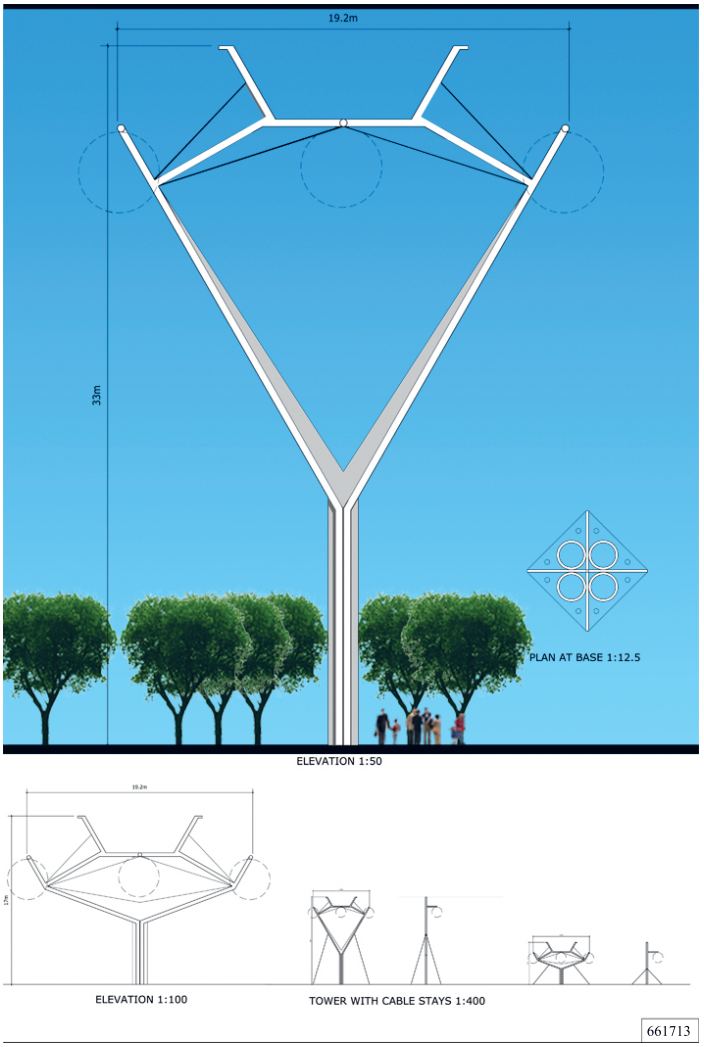


Einföld, mjög áhugaverð hugmynd en þyrfti að móta betur.
Tæknileg umsögn: Burðarvirki þarf að þróa áfram með tilliti til styrkleika og raffræðilegra fjarlægða í möstrum.

A simple, very interesting idea but requires better formulation.
Technical opinion: The support structure requires further development with respect to the strength and electrical distances in towers.

Tillaga 23 merkt 661713

Stephen Leep Associates, Architects and Planners
Stephen Lepp, AIA
Bandaríkin

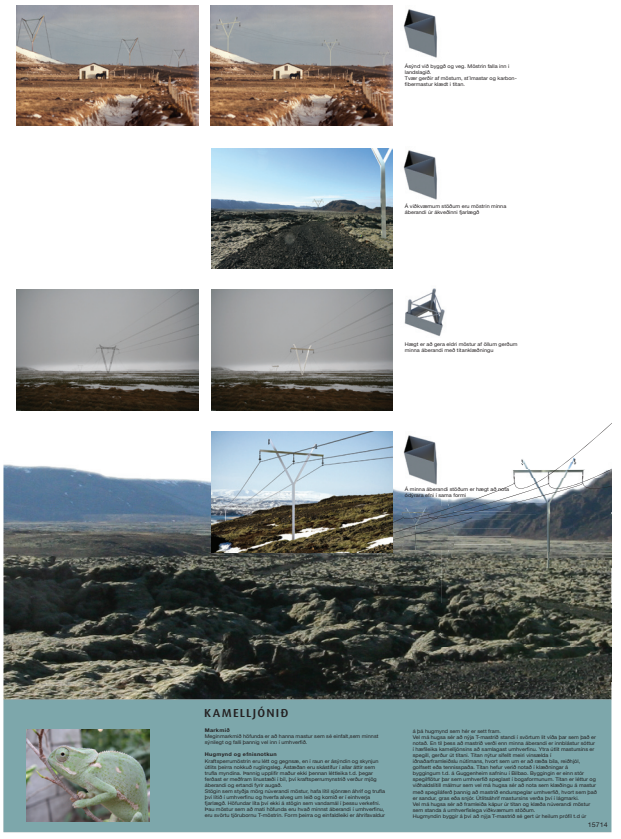


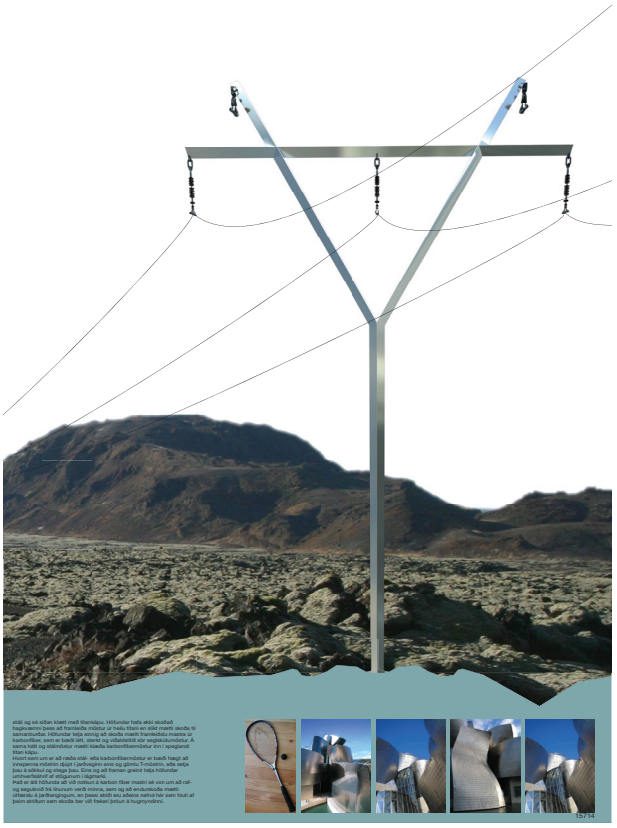
Góð framsetning þar sem sterkt form er túlkað af kunnáttu og þekkingu. Góð efnismeðferð. Vantar að sýna einangrara og formið gengur ekki óbreytt.
Tæknileg umsögn: Tillagan byggir á að einangrun sé fengin með því að húða stálmastur með einangrandi efni. Þetta er ekki framkvæmanlegt tæknilega. Ef leysa á burðarvirkið með hefðbundnum einangrurum þarf að breyta forminu til að uppfylla fjarlægðir milli leiðara og burðarvirkis.

A good presentation where strong form is interpreted with know-how and knowledge. Good handling of material. Insulators are not shown, and the form will not work unchanged.
Technical opinion: The proposal is based on insulation being obtained by coating a steel tower with insulating material. This is not technically doable. If the support structure is to be solved with traditional insulators, the form must be changed to fulfil spacing requirements between power lines and the support structure.

Tillaga 24 merkt 15714

Batteríið ehf, arkitektar
Hönnunarhópur: Sigurður Einarsson arkitekt, Anders Møller Nielsen arkitekt, Guðmundur Osvaldsson byggingartæknifræðingur
Samstarfsmenn: Martin H. Willliams arkitekt, Hjalti Finnsson framleiðsluhönnuður
Ísland



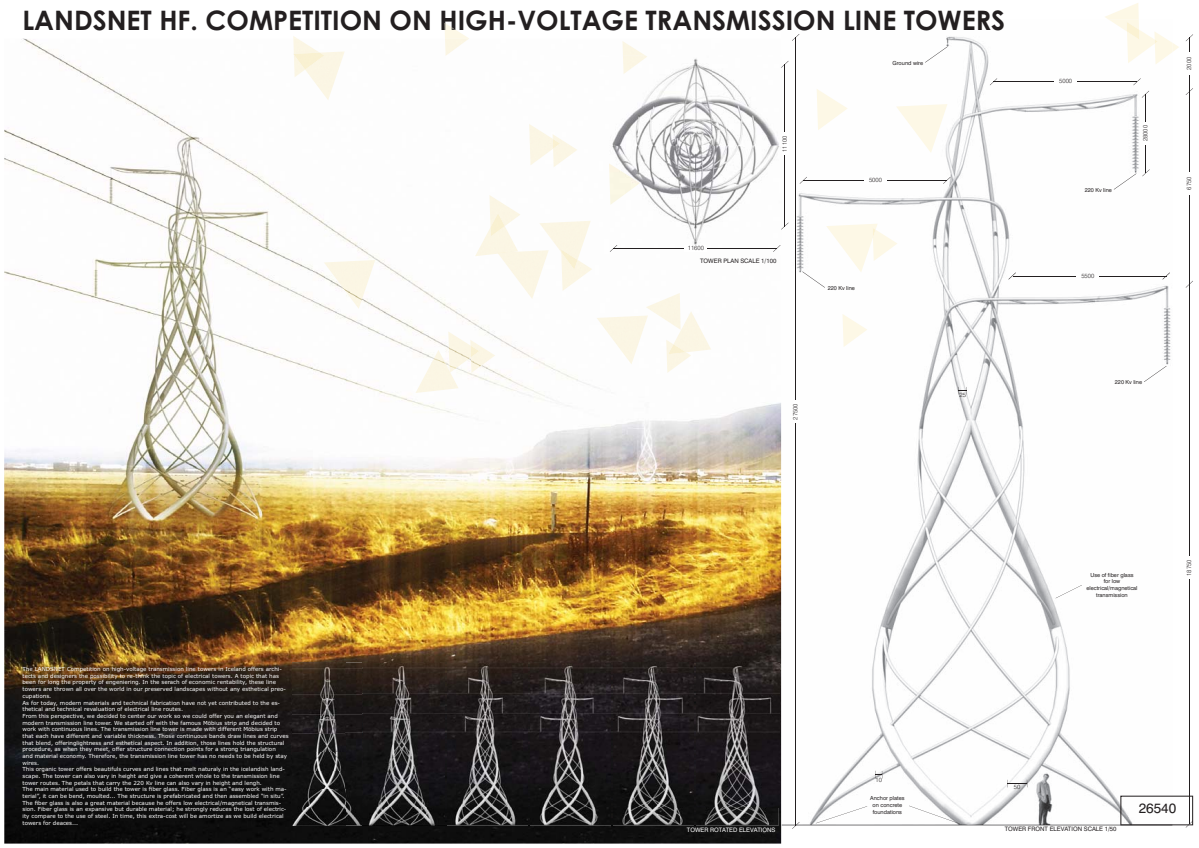


Athyglisverð hugsun byggð á sérstöku efnisvali. Áhugaverð og virðingarverð tilraun til að fella möstrin að umhverfinu.
Tæknileg umsögn: Burðarvirkið er þekkt en það þarf að vera efnismeira og e.t.v. vantar stög.

Interesting thinking, based on special selection of materials. An interesting and estimable attempt to blend towers into the environment.
Technical opinion: The support structure is known but has to be sturdier and perhaps is lacking guy wires.

Tillaga 25 merkt 26540
Athyglisverð tillaga

Martin De Moliner
William Roucher-Thomassin
Frakkland

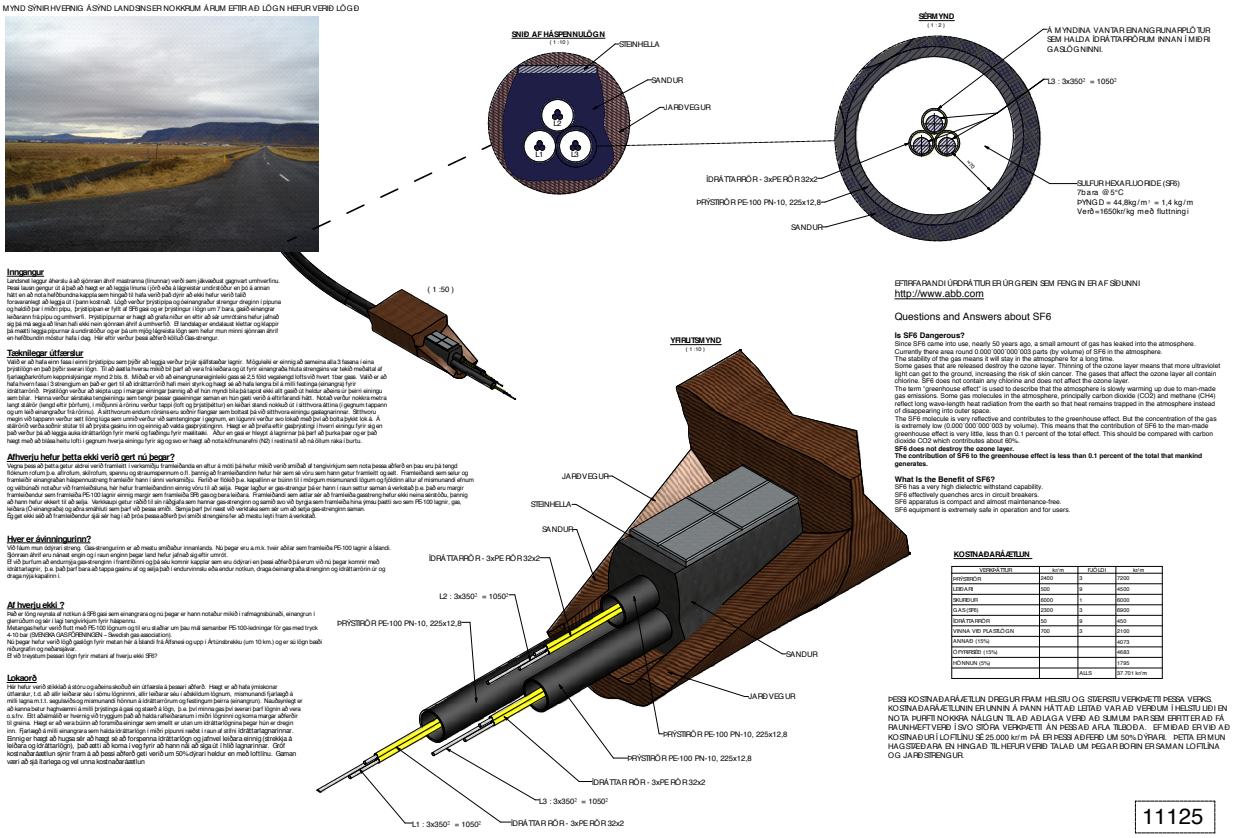


Mjög rómantísk nálgun og sterk skírskotun til lífrænna burðarkerfa. Rétt hefði verið að útfæra bjálkana betur og jafnvel ímynda sér hvernig náttúran sjálf hefði leyst þá. Þessi möstur myndu sóma sér vel hvar sem er í heiminum og vekja athygli sem mótvægi við tæknilega gerð nútíma mastra.
Tæknileg umsögn: Tæknilega flókin lausn en hægt að þróa hana. Þverslár þarf að styrkja. Leiðarafyrirkomulag hagstætt með tilliti til rafsegulsviðs.

A very romantic approach and strong reference to organic support systems. It would have been correct to detail the beams better and even imagine how Mother Nature would have worked them out. These towers would be very suitable anywhere in the world and be noticed as a counterbalance to the technological structure of modern towers.
Technical opinion: A technically complicated solution but possible to develop. The crossbars must be strengthened. Power line arrangement advantageous with respect to the electromagnetic field.

Tillaga 26 merkt 11125

Gunnar Óli Sigurðsson
Ísland



Ekki í samræmi við tilgang samkeppninnar.

Not in accordance with the purpose of the competition.

Tillaga 27 merkt 23108

Norlund Architects
Tommy Fuglsang, Architect MAA, Cand. Arch.
Tim Nørlund, Architect, BA
Danmörk

PROJECT DESCRIBTION

We have designed a 220 kV high-voltage transmission tower, partially inspired by the exceptional geyser phenomenon.
The tower is desined to elegantly adapt and adjust to the spectacular Icelandic landscape.

We have chosen not to work with a rigid frame structure, but to utilise a series of galvanized steel pipes.
The structure of the tower exists only of these pipes. The structure is made of four arc-bend pipes at the base, four straight pipes in the middle section and two arc-bend ppipes and a slightly curved at the top. The arc-bend part at the base is identical to the ones used at the top of the tower.

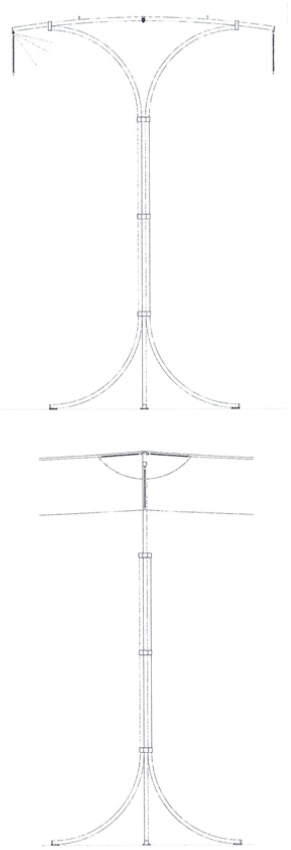
The structure is then fixed and stiffened with a series of fittings at the different joint points. There are four fittings at the foundation, two for fixing the conductors in the outer positions and one for the centre conductor. The are additional three special fittings to fix and strengthen the middle section of the structure.
This way the tower can be transported in parts that can be connected at the site.

The tower can adapt to the terrain by adjusting the length of the straight pipes in the structure, and the height of the tower can also be adjusted this way.

The parts can be connected at the ground and, thanks to the foundation-fittings at the base working as hinges, be erected by using a winch. With this design the tower structure consists of only three main elements, the arc pipes, the straight pipes and the curved pipe at the top.

COMPETITION SUBMISSION

HIGH-VOLTAGE TRANSMISSION LINE TOWERS LANDSNET

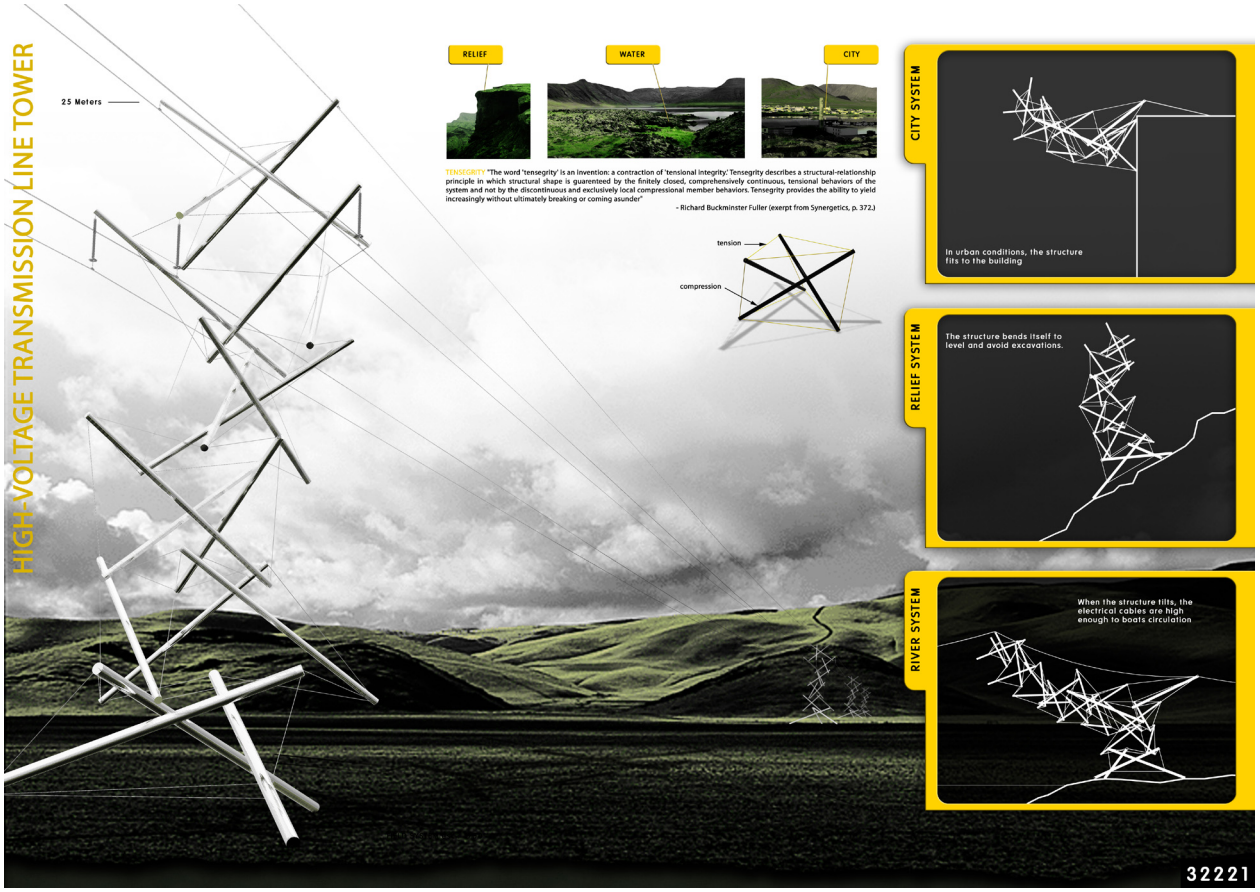


Frumleg hugmynd með ívafi einfaldleika og spennu.
Tæknileg umsögn: Ekki æskilegt burðarþolslega að hafa strekkkeðju í miðju og hengikeðju til hliða.

Original idea with a touch of simplicity and tension.
Technical opinion: Not desirable regarding load bearing capacity to have a tension chain in the middle and a suspension set to the side.

Tillaga 28 merkt 32221

ATELIER 0+
Thibault Inigot
Atticus Manchego
Frakkland

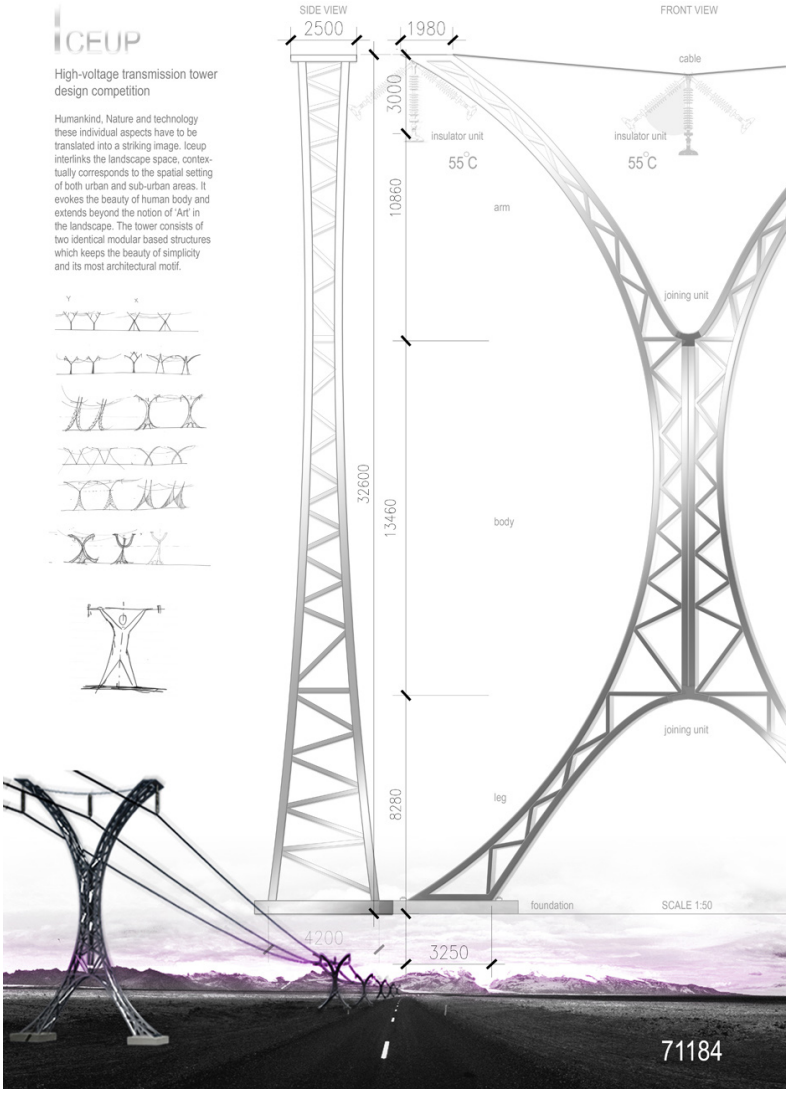


Fersk og mjög áhugaverð tilraun til að fella burðarvirki að landslagi með því að upphefja þyngd eininga. Kraftur, áræðni og sköpunargleði. Hefðbundin vandamál burðarþols gerð sýnileg. Ef unnt væri að reisa þessi möstur þá væri hvert þeirra tákn um sigur mannsandans á frumkröftunum. All flókin lausn burðarþolsfræðilega.
Tæknileg umsögn: Burðarvirki þarf að þróa mikið áður en þetta telst raunhæf lausn. Einnig þarf að þróa betur hvernig leiðarar eru hengdir upp með tilliti til fjarlægða í burðarvirki.

A fresh and very interesting experiment to blend the support structure into the landscape by glorifying the weight of units. Power, boldness and creative zest. Traditional problems of load bearing capacity made visible. If it were possible to build these towers, each of them would be a symbol of the victory of man's spirit over primal forces. Fairly complex solution regarding load bearing capacity.
Technical opinion: The support structure requires a great deal of development, but this is deemed a realistic solution. Better development is also needed of how power lines are hung with regard to distances in the support structure.

Tillaga 29 merkt 71184

Manfredi Valenti
Polly Tsang
England

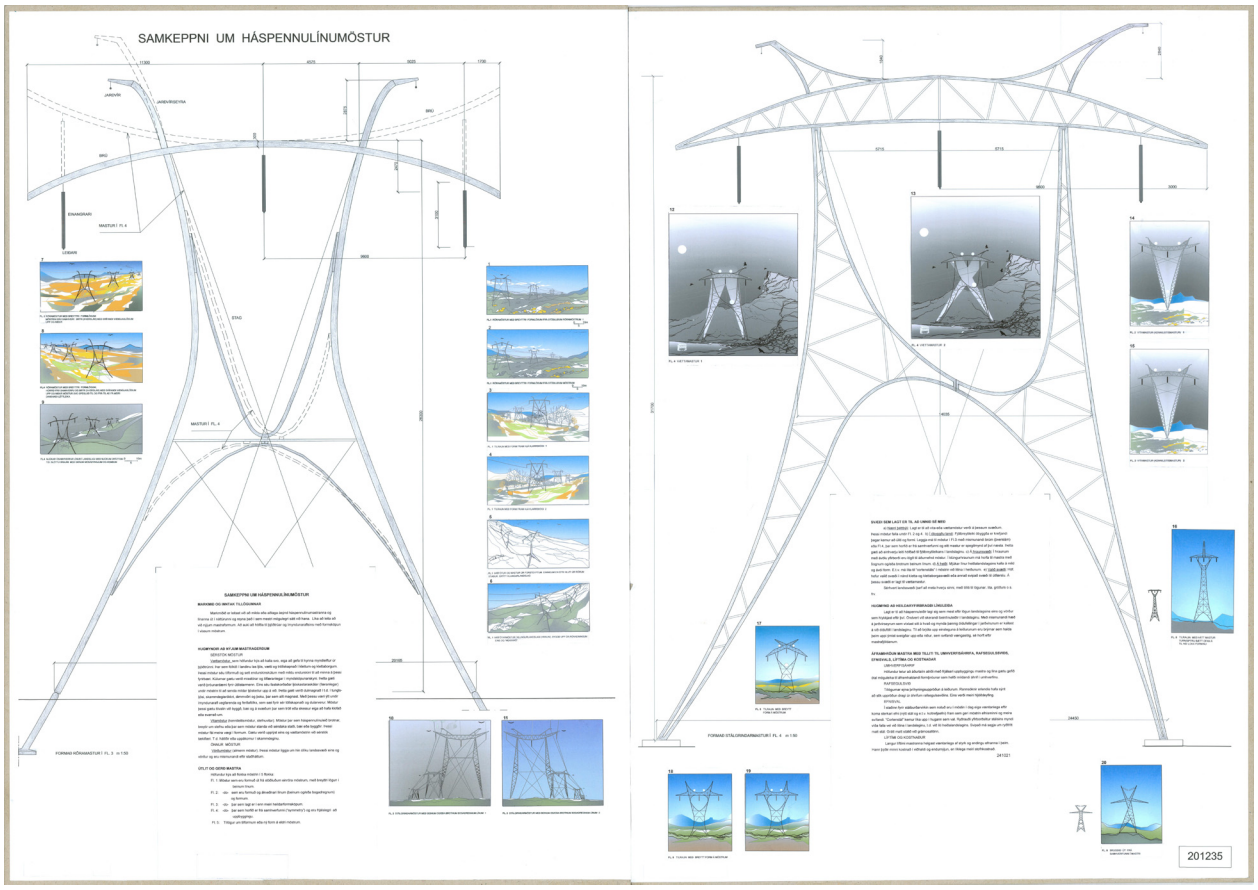


Einföld en of þunglamaleg. Mætti vinna nánar.
Tæknileg umsögn: Þarf að breyta útslætti vegna útsveiflu einangrara.

Simple but too ponderous. Could be worked on further.
Technical opinion: Swing-out because of insulators' swinging must be changed.

Tillaga 30 merkt 201235

Örnólfur Hall, arkitekt
Ráðgjöf: Ragnar Darri Hall, landfræðingur
Helgi Friðjónsson, myndlistarmaður
Ísland

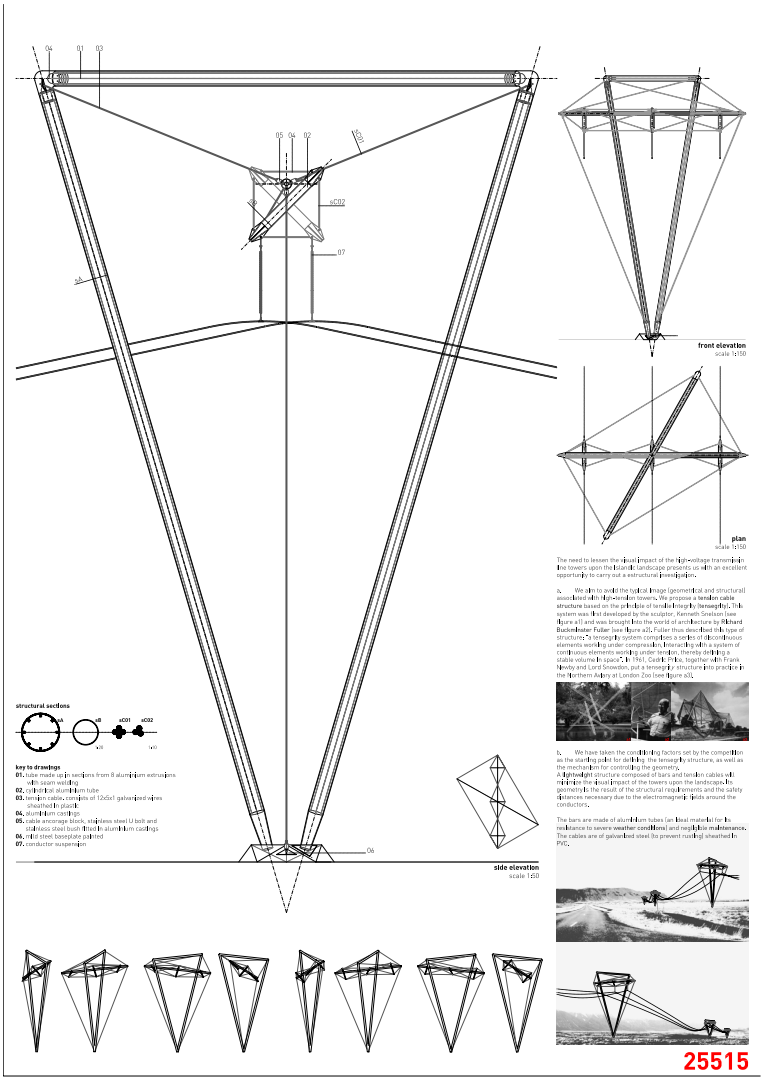


Höfundur kynnir ótal mastragerðir sem sumar eru nýjar af nálinni þar sem meðal annars er lögð er áhersla á að nota lýsingu í túlkun staðhátta. Helsta nýbreytnin er þó tengingin við þjóðsögur og forn kennileiti. Vel mætti vinna áfram með slíkar hugmyndir.
Tæknileg umsögn: Tæknilega framkvæmanleg.

The author presents innumerable types of towers, some of which are new, where emphasis is placed on using lighting to interpret local conditions. The main innovation is nevertheless the connection to folktales and ancient landmarks. Further work could well be done with such ideas.
Technical opinion: Technically doable.

Tillaga 31 merkt 25515

Miquel Mariné Núñez, architect
Samstarfsaðilar: Albert Brufau Safont, arkitekt og magntaka
Charmaine Lay, arkitekt
Clara-Margarida Rovira I Galiano, aðstoð
Spánn

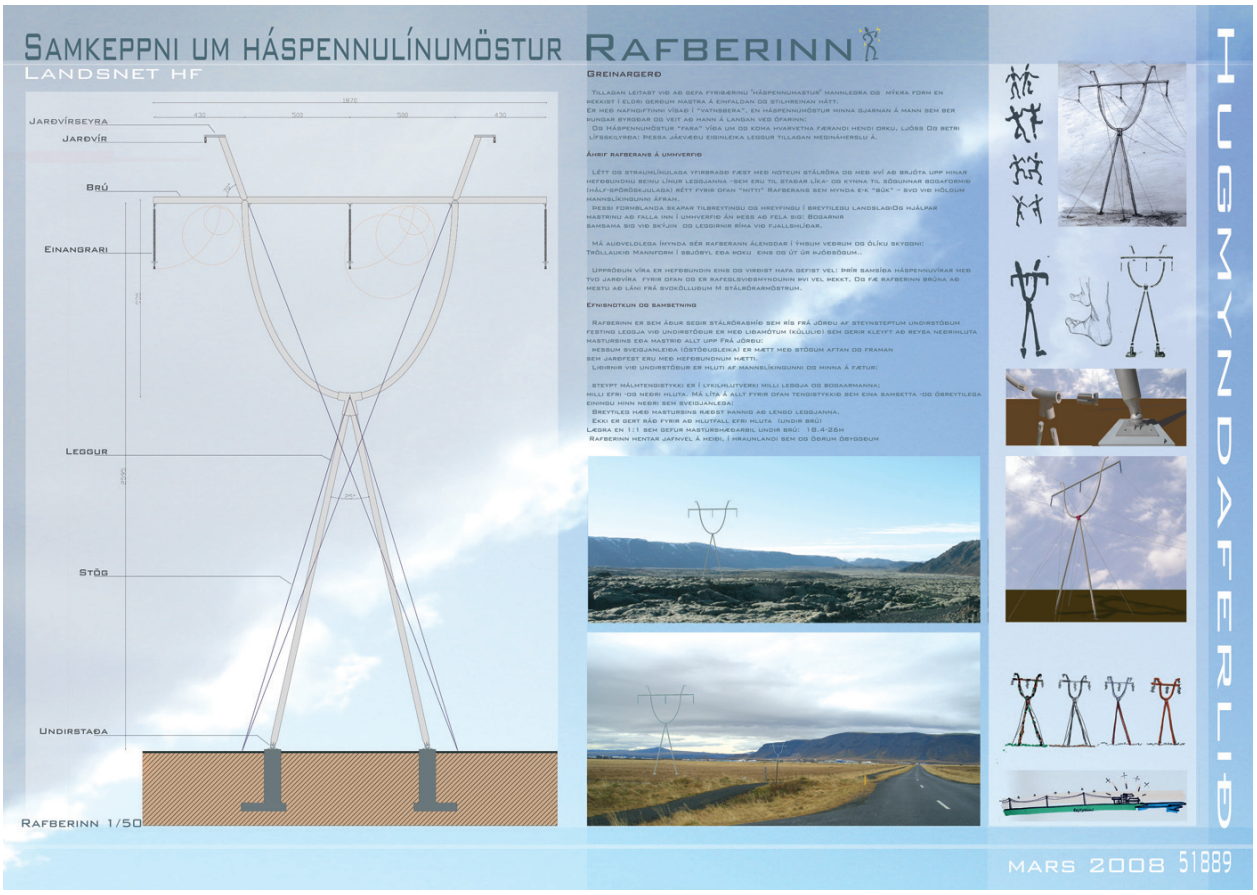


Vel framsett tillaga. Hugvitssamleg útfærsla á burðarvirki, þar með talin þverslá og stögun. Athyglisverðar útfærslur á innbyrðis afstöðu burðarvirkis og línuleiðar.
Tæknileg umsögn: Hefðbundið burðarvirki sem hægt er að útfæra ef stögum er breytt, en upphengi leiðara verður að þróa frekar til að uppfylla kröfur um fjarlægðir.

Well-presented proposal. Ingenious implementation of the support structure, including the crossbar and guy wiring. Interesting implementations of internal relations between the support structure and line route.
Technical opinion: A traditional support structure that is possible to implement if guy wires are changed, for the suspension of power lines must be further developed to fulfil the distance requirements.

Tillaga 32 merkt 51889

Pétur Arnar Kristinsson
Frakkland

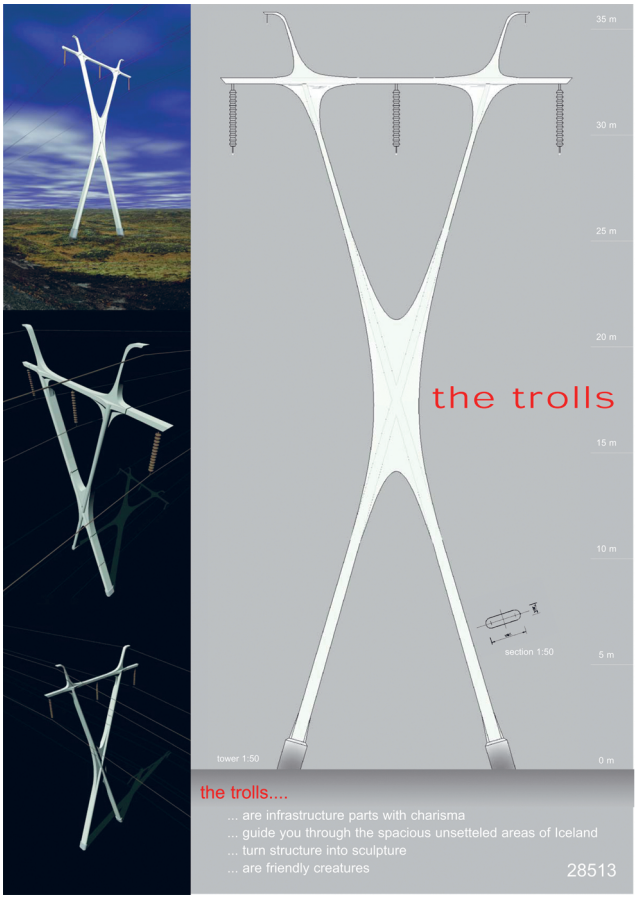


Léttleiki er höfuðeinkenni tillögunnar. Áhugaverð tilraun til að tengja gerð mastra við form líkamans.
Tæknileg umsögn: Fyrirkomulag leiðara og upphengi er með hefðbundnum hætti. Burðarvirkið í efri hluta mastursins verður að vera efnismeira.

Lightness is the main characteristic of the proposal. An interesting experiment to connect the type of towers with the form of the human body.
Technical opinion: The arrangement of power lines and suspension is traditional. The support structure in the upper part of the tower must be sturdier.

Tillaga 33 merkt 28513
Athyglisverð tillaga

Acht. Civil Engineering Office
Rudolf Brandstötter, Dipl. Ing.
Peter Spreitzer, Dipl. Ing.
Austurríki



Mjög einföld og vel rökstudd tillaga. Form mastursins sprettur nær eingöngu af notagildinu en hefur þó sterka skírskotun til mannslíkamans sbr. orðið tröll. Slík skírskotun krefst þó mikils af hönnuðinum því mannsaugað er næmt fyrir slíkum formum.
Tæknileg umsögn: Fyrirkomulag leiðara og upphengi er með hefðbundnum hætti. Þarf e.t.v. að bæta við stögum í burðarvirkið.

A very simple and well -reasoned proposal. The form of the tower derives almost solely from its utility but nevertheless makes a strong reference to the human body, cf. the word troll. Such a reference, however, demands a great deal of the designer because the human eye is sensitive to such forums.
Technical opinion: The arrangement of power lines and suspension is traditional. It is perhaps necessary to add guy wires to the support structure.

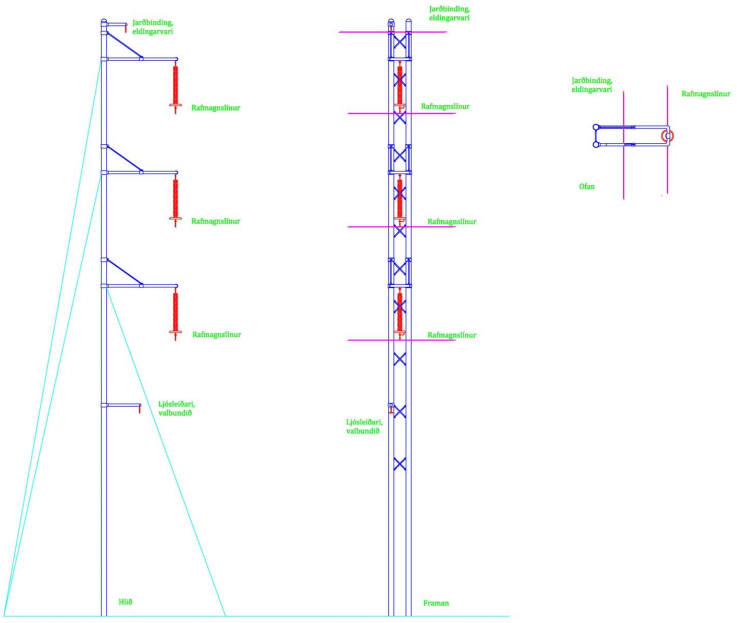
Tillaga 34 merkt 78268

Svanur Baldursson
Ísland

Tillaga 78268

Hugmynd 78268 er hugsuð útfrá þeim forsendum að brjóta aðeins upp útlits hina hefðbundnu stálgrindar háspennumastra. Markmið var að minnka sjónræna þáttin nokkuð og einfalda smíði þeirra. Hugmyndin er sú að búa til stálröra mastur sem hefur eiginleika stálgrindarmastra sem gerir það að verkum að það er hægt að hækka þau í svipaða hæð og stálgrindarmöstrin án þess þó að minnka burðarþol og endingu. Einnig er hugmyndin sú að brjóta svolítið upp þann stíl sem hefur verið á mastragerðum hingað til og þá sérstaklega nær byggð og fjölförnum þjóðvegum.

Í lóðréttu möstrunum eru 2 stálrör boltuð saman til að halda línunum uppi. Þessi möstur eru hugsuð til þess eins og áður segir að vera nálægt þéttbýliskjörnum og fjölförnum þjóðvegum þar sem almenningur sér hvað mest af þeim. Þau eiga að vera einföld ásjónar sérstaklega þar sem er verið að flytja mikla orku, aðrar línur þar sem spennan er ekki jafn há og 220 kV eiga þá að virðast svipað einföld. Hæð mastursins í heild er 34 metran og hæð undir lægsta rafmagnsvír er 16 metrar. Þá er hæð ljósleiðara upphengju sem er valbundin rúmlega 11 metrar. Upphengjurnar fyrir rafmagnsvírana þurfa mikla og góða festingu og styrk. Þær liggja í U og festast á bæði stárörin í leggnum. Vegna álags þurfa þær að vera aukalega styrktar upphengjur festar á þær. Þá þurfa stögin að vera vel fest.

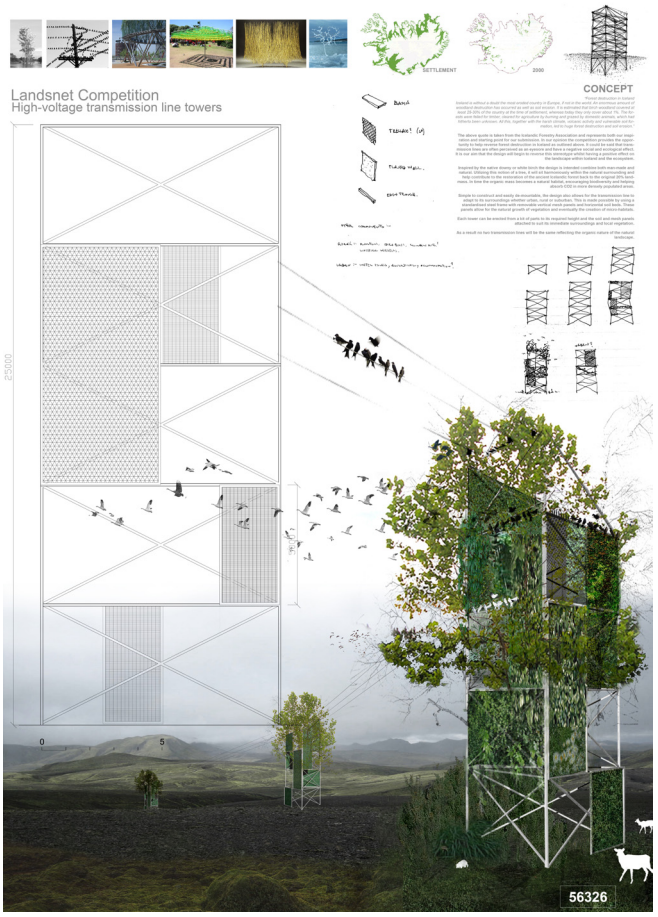


Einföld en átakalítil tillaga og lítil áhersla lögð á framsetningu.
Tæknileg umsögn: Tæknilega fær lausn.

A simple but noncontroversial proposal, with little emphasis placed on presentation.
Technical opinion: Technically suitable solution.

Tillaga 35 merkt 56326

GRAS (Grovers-Raines Archtects Studio) for
Groves-Raines Architects Ltd.
Stuart Falconer
Gunnar Groves-Raines
Camilla Parsons
Skotland

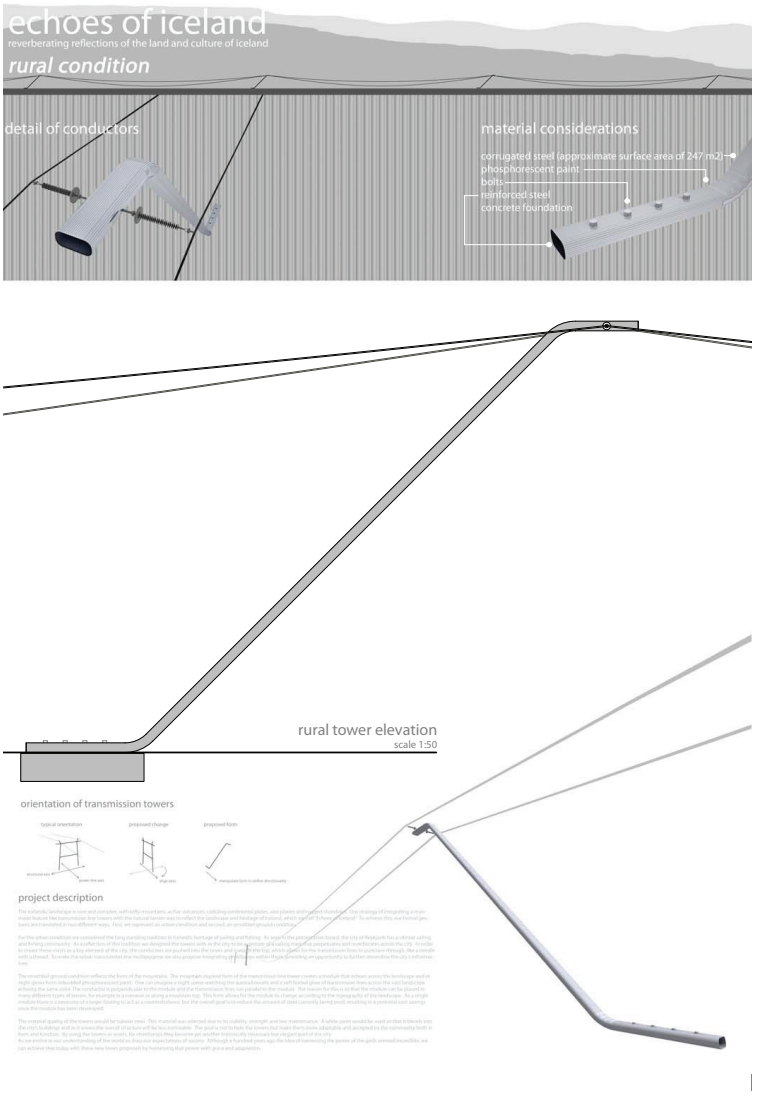


Áhugaverð hugmynd og tilraun til að gróðurvæða línumannvirki.
Tæknileg umsögn: Gróður nálægt leiðurum er ekki æskilegur sökum hættu á útleysingu.

An interesting idea and attempt to vegetate the line structure.
Technical opinion: Vegetation near power lines is not desirable because of the risk of power outage.

Tillaga 36 merkt 12345

Michael Heller
Jennifer Ramirez
Bandaríkin

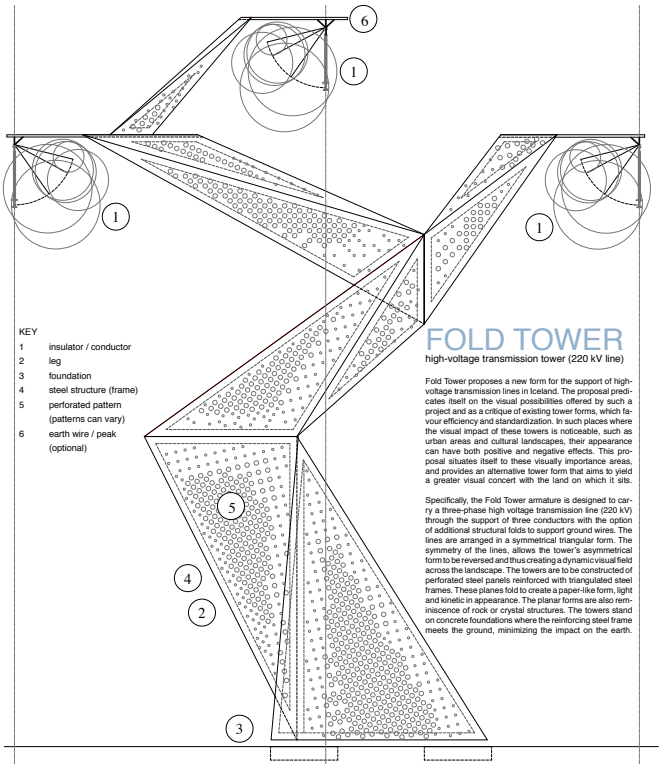


Mjög vel framsett tillaga. Mikill léttleiki, kraftur og vilji til að einfalda stoðkerfi línumannvirkja.
Tæknileg umsögn: Raffræðileg hönnun gengur ekki upp og burðarvirki ekki heldur.

Very well-presented proposal. Great lightness, vigour and determination to simplify the support system of lines structures.
Technical opinion: The electrical design does not work nor does the support structure.

Tillaga 37 merkt 57831

Sengsack Tsoi
Kanada

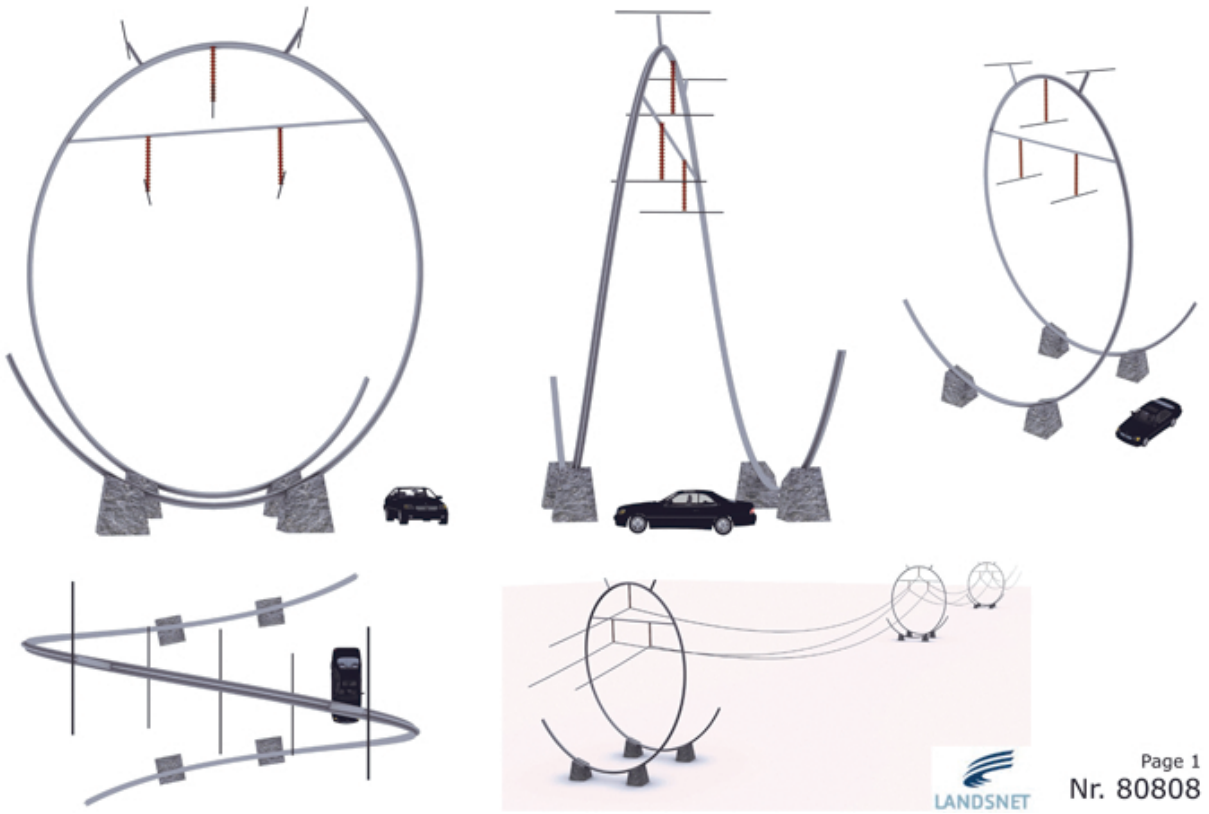


Djörf, sérstök og ögrandi tillaga sem felur í sér margbreytilega möguleika á útfærslum. Táknræn tilvísun til trjástofna mótaðir úr götuðum mismunandi formuðum málmplötum.
Tæknileg umsögn: Mikil efnisnotkun. Fyrirkomulag leiðara og upphengi hagkvæm út frá rafsegulsviði. Vantar jarðvíra.

A daring, unique and provocative proposal, entailing diverse possibilities for implementation. A symbolic reference to tree trunks fashioned from perforated differently shaped metal plates.
Technical opinion: Much use of material. Arrangement of power lines and their suspension are advantageous regarding the electromagnetic field. Ground wires are lacking.

Tillaga 38 merkt 80808

Johann Eyfells
Samstarfsaðilar: Samtök og íslenskir arkitektar
Bandaríkin



Mjög smellin, áhugaverð og vel framsett tillaga. Leikið er með hringlaga burðarvirki sem upphefjast og enda í þungum steyptum klossum. Tillagan vísar í gormlaga sveiflu rafbylgjunnar.
Tæknileg umsögn: Raffræðileg hönnun ekki í lagi þar sem fjarlægð milli efsta leiðara og burðarvirkis er ekki næg við útsveiflu leiðara í vindi. Tillagan er efnisminni en verður í raun.

Very witty, interesting and well presented proposal. It plays with a round support structure that is glorified and arrogant in heavy, poured-concrete clogs. The proposal refers to the helical fluctuation of an electric wave.
Technical opinion: The electrical design is not satisfactory since the distance between the top power line and support structure is insufficient for the wind movement of power lines. The proposal is flimsier than it will actually be.

Tillaga 39 merkt 42008

Rover Mavsar, Slóveníar
Marta Rois Diaz, Spánn
Mercedes Rodrigo Garcia, Spánn

ELASTIC LANDSCAPE

KEYWORDS

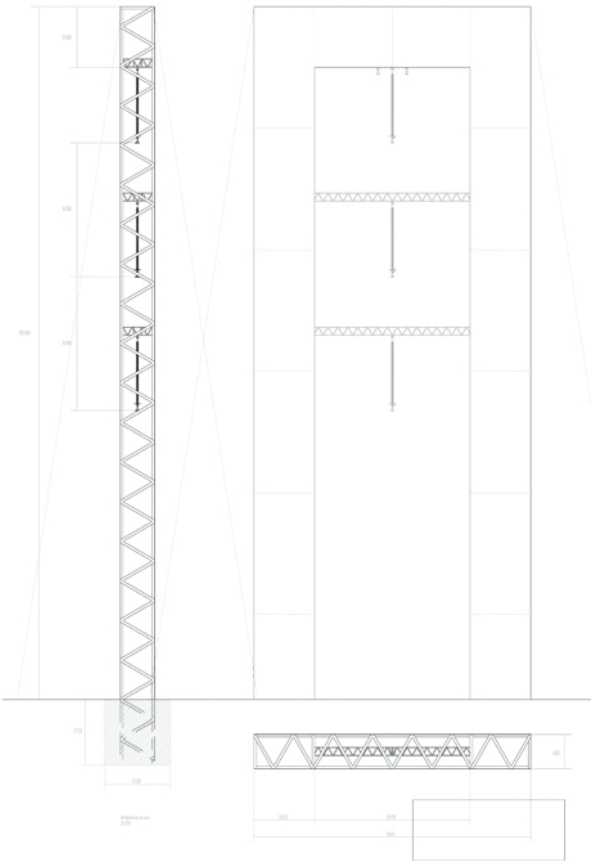
dissipation, intangible, minimal, stimuli, pixilation, reverberation, accent, dynamic, composition, choreography, synchrony, variation, elasticity, gesture, shift, drift, chord, tone, uncertainty, illusion

CONCEPT

The design draws inspiration from the nuances of natural phenomena, and entails the absolute disappearance of the high-voltage tower structures from the landscape views.
Instead of a physical structure we seek to orchestrate a continual choreography of natural events to celebrate the Icelandic scenery and its exceptional natural qualities. The aim is to subtly animate the lulling landscapes that characterize Iceland, and at the same time, to increase awareness of the natural phenomena at play in the site.
All three conductor cords and ground wire are held in possition by a 'visualy unstable' structure, which if visible, is only perceived as a minute and yet vital vibration in an otherwise perfectly still landscape view.
We seek an eventful instead of a material effect. Working with the natural elements that usually determine the experience of the environment over time, the aim is to subtly intensify, renew and exalt the character of the scenery. Inflecting small nuances in the view will awaken a 'sleeping' landscape, if only momentarily.
A series of isolated notes cause the effect of 'elongating' both the visual and kinetic experiences of the landscape. The high voltage tower structures are conceived as instruments that play with environmental chords to accentuate and enliven a myriad of natural scenarios. Almost imperceptible, the success of this somewhat cunning scheme, lays precisely in the uncertainty and sparse frequency of natural events, such as a mirage, a reflection or a geyser's effluence.
The result is the dissipation of man-made physical structures from the landscape and the intensification of the natural scenery. The visual effect of the towers in the scene would resemble that of a vibration, a reverberation, a fractal pixilation of the view, a subtle dissonance, a nuance in tone, a flight o light, ...conforming a continual sequence of micro events in sync with an elastic landscape.

TECHNICAL DESCRIPTION

The structure is consists of a slim steel lattice portal that can be easily transported in separate parts and assembled on site. the edge of the portal frame is the minimum required to access, assemble and adjust the different parts. The structure is clad with micro-perforated polished stainless steel panels, with a mirror effect on the surface. The mirror is to dissipate the view of the actual tower in the landscape while the perforations help to handle wind loads. Lastly, anchor cables stabilize the thin structure. Aimed at its own disappearance, the tower is conceived as an extremely minimal and functional object.



Hreint form en þunglamalegt.
Tæknileg umsögn: Raffræðileg hönnun ekki í lagi þar sem fjarlægð milli leiðara og burðarvirkis er ekki næg við útsveiflu leiðara í vindi.

A clean form but ponderous.
Technical opinion: The electrical design is not satisfactory since the distance between the power lines and support structure is insufficient for the wind movement of power lines.

Tillaga 40 merkt 21997

Javier Burón García
Magdalena Sánchez Mora
Írland

Tripods

Not resembling a tower
Actual high tension power line towers are extremely efficient structures shaped by very restrictive technical and security requirements and by great economic cost, principally because they travel across hundreds of kilometers with restrictive height requirements. Proposing a new successful design for these structures will require a completely new approach.

Memory and place
We have set three conceptual objectives which will guide us in this re-design process:
—Avoiding the symbolic and iconic shape of a power line tower (metal trusses and T-shaped structures) will dissociate their negative connotations from inhabitants collective imaginary.
—Creating a self-similar design instead of a single design will blend these elements within the natural landscape. I.e. a rock in a specific landscape is self-similar to surroundings rocks but never exactly the same.
—Unique structures instead of repeated elements will create a strong bound between place and memory, individual and landscape. In the same way that characteristic landscape elements have been incorporated in society memory and history through the centuries.

Electromagnetic and lightning performance
Our research has shown us that the triangular arrangement produces lower emission of magnetic fields than the horizontal arrangement due its more symmetrical configuration[1,2].This geometry reduces the width of the whole layout producing a more compact distribution as well. Triangular arrangements does not adapt well to common tower structures because they require more structural elements to support the middle cable in a different height. We propose a completely new kind of tower designed for this more efficient triangular arrangement and minimizing the amount of structural elements as well.

In terms of lightning performance, we have gathered information showing that guy cables decrease dramatically the insulation properties of overhead distribution lines, increasing the risk of flashovers[3] . Same low performance has been observed in metal and concrete structures as well.

We have decided using laminated wood structures which provide great insulation properties and a extremely efficient structural qualities, providing great stability and wind resistance and eliminating the use of guy cables. At the same time, laminated wood offers a natural material, an organic look and feel, and a lower visual impact in the landscape.

Geometry
Our design steps away from traditional tower structures proposing not only a single design but a highly versatile system which can take thousand of different spatial configurations so each tower could be unique. At the same time the proposed system is composed by only three elements (laminated wood tower poles, laminated wood cable branches and laminated wood joinery branches) which can be combined in a controlled and reduced number of ways (five tower poles, five cable branches and ten joinery branches). This reduce set of elements give us more than five hundred different towers which combined with our four different finishes can create over two thousands unique elements.

Measuring eight hundreds kilometers of high tension overhead power lines in Iceland, this design will allow us a unique tower in each location, achieving a unprecedented level of relationship between landscape, memory and man-made structures.

Materials
Using laminated wood for the structure allow us a greater range of finishes or skins which will blend with the four proposed landscapes: near urban areas, in areas with lava, in unsettled areas, and on heaths.

So near urban areas laminated wood towers will be white lacquered. In areas with lava, the outer layer will be carbonized providing one of the oldest way to preserve timber and offering and unrivalled blend with the volcanic landscape.

In unsettled areas, they will show their wood color and texture protected with transparent varnishes. On heaths, the poles will be sprayed with fertilizers allowing vegetation to grow until specified height.

1.C. Garrido, A. F. Otero, and J. Cidrás, "Low-Frequency Magnetic Fields From Electrical Appliances and Power Lines", IEEE Transactions on Power Delivery, Vol. 18, No. 4, October 2003.

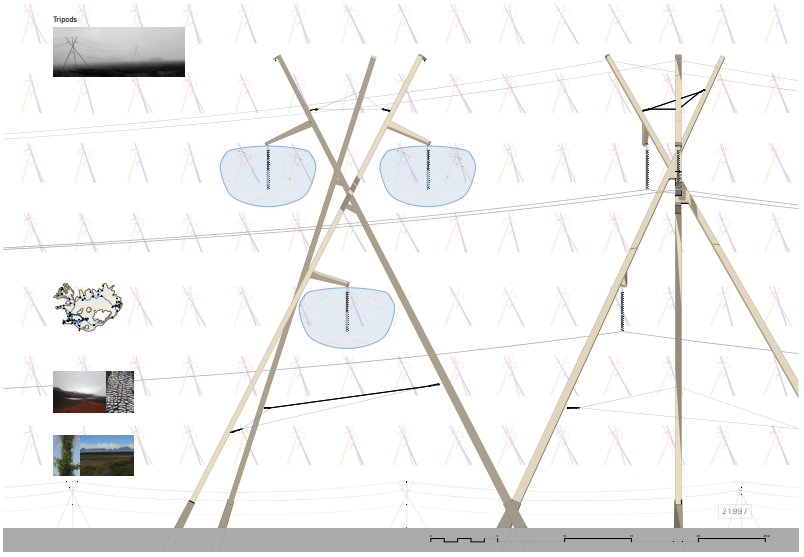
2.J. L. Cándenas, "Calculation of the effective magnetic field under high-voltage power lines", Departamento de Ciencia y Tecnología de Materiales y Fluidos, Universidad de Zaragoza, Spain, 1998.

3. IEEE Power Engineering Society, "IEEE Guide for Improving the Lightning Performance of Electric Power Overhead Distribution Lines", Revision of IEEE Std 1410-1997, May 2004.

Fertilizers poles on heaths

Exterior carbonized poles in volcanic landscape

21997

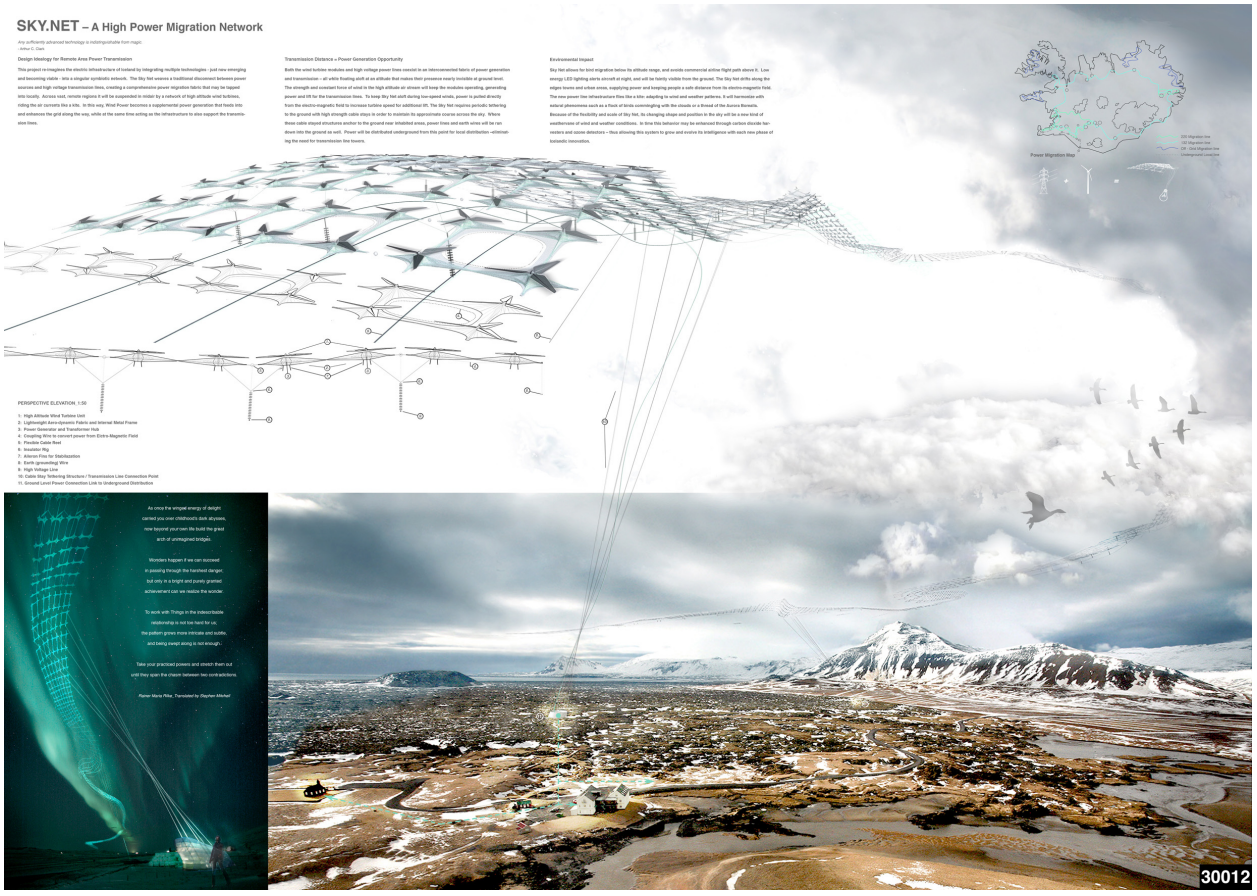


Tillagan leggur áherslu á að draga úr umhverfisáhrifum. Notkun á límtré með mismunandi yfirborðsáferð er mjög áhugaverð. Þrífóta formið skírskotar til fortíðar en virðist að auki nútímaleg nýsmíði. Erfitt er þó að átta sig á öllum hinum möguleikunum sem tillagan virðist gera ráð fyrir. Því er erfitt að mynda sér skoðun á aðlögun að staðháttum.
Tæknileg umsögn: Burðarvirkið er ekki úthugsað.

The proposal emphasizes reducing environmental impact. The use of plywood with a different surface texture is very interesting. The tripod form harks back to the past but, in addition, seems to be modern, new construction. It is difficult to realize all of the possibilities for which the proposal seems to provide. It is therefore difficult to form an opinion on adaptation to local conditions.
Technical opinion: The support structure has not been thought out.

Tillaga 41 merkt 30012
Viðurkenning

Jared Winchester
Bandaríkin

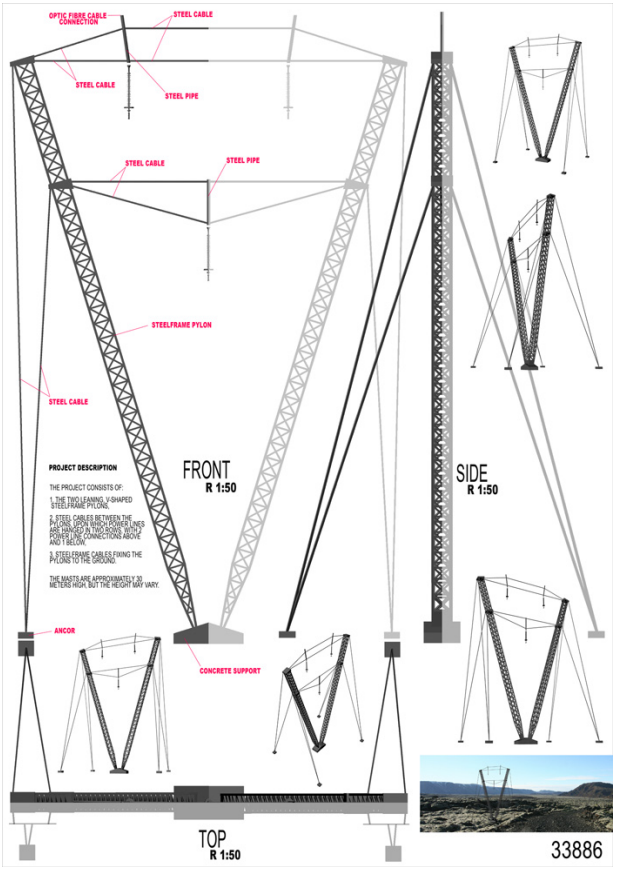


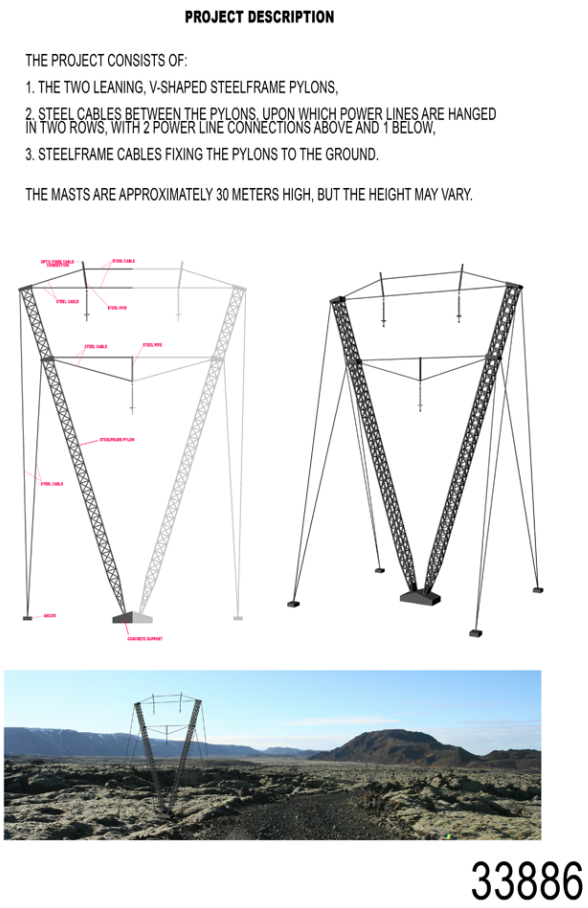
Bylting, draumórar eða vísindaskáldskapur? Það er ekki nokkur möguleiki að átta sig á raunhæfni þessarar tillögu á þeim tíma sem okkur er gefinn. Tillagan er þó aðdáunarverð og augljóst að höfundi liggur það mjög á hjarta að leysa orku og umhverfismál í upphafinni sveiflu.

Revolution, vision or science fiction? There is no possibility of orienting oneself to how realistic this proposal is within the time we are given. The proposal is nevertheless admirable, and it is clear that resolving energy and environmental affairs in an idealized oscillation was very much on the author's mind.

Tillaga 42 merkt 33886

Nikola Zamurovic
Serbía



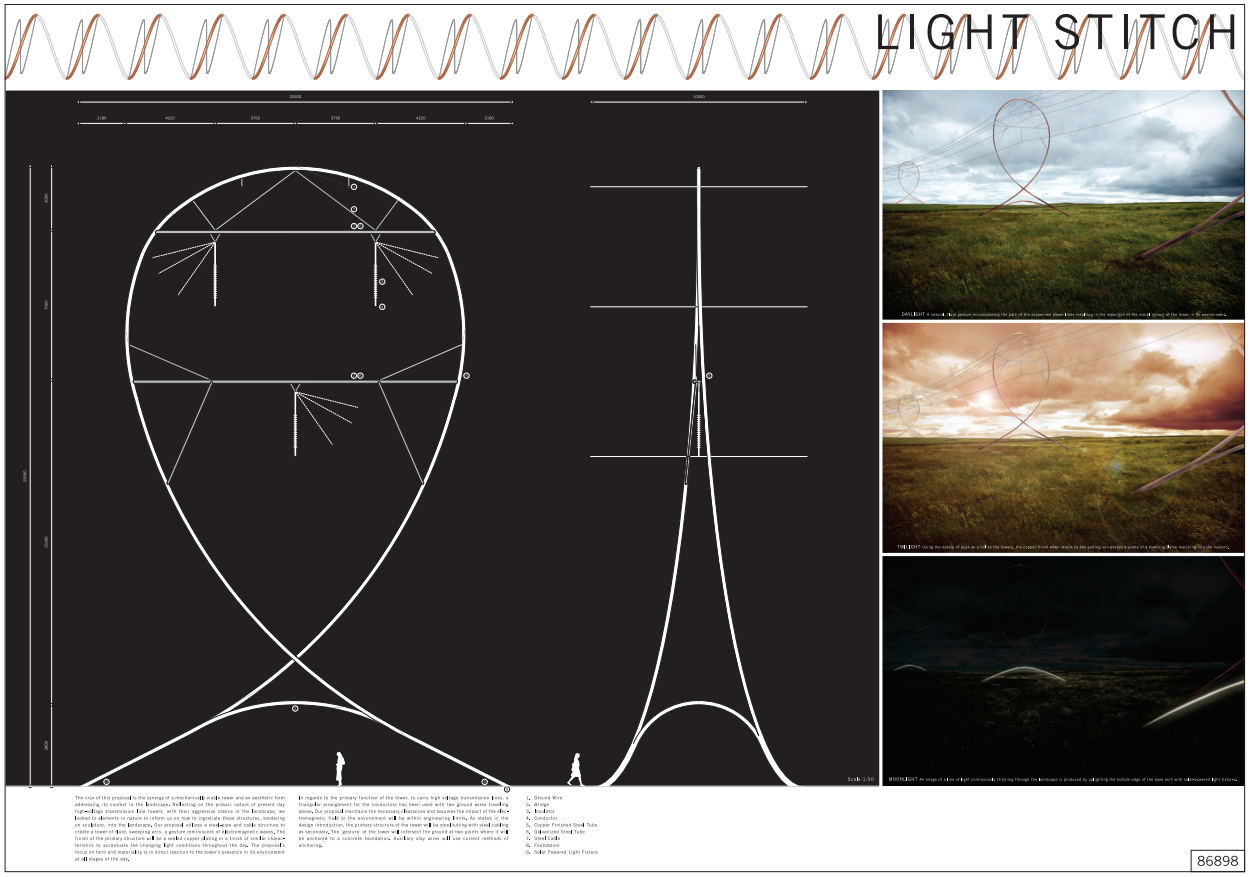


Skýr og vel framsett tillaga en þekkt form.
Tæknileg umsögn: Burðarvirki er í lagi.

Clear and well-presented proposal, but a known form.
Technical opinion: Support structure is satisfactory.

Tillaga 43 merkt 86898

MAak
Matthew Jasion
Akiko Mineshima
Aiko Tokunaga
Keina Takahashi
Japan

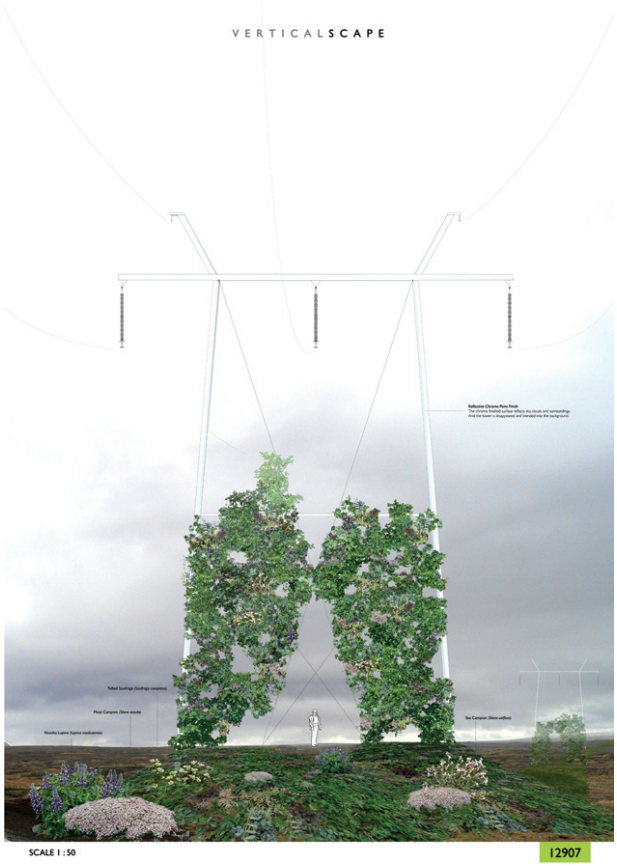


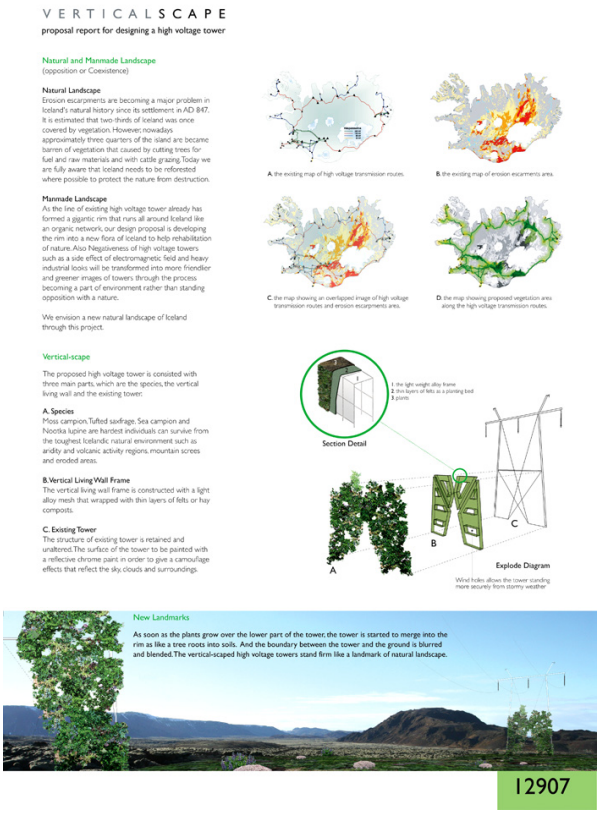
Tillagan leitast við að túlka bylgjuhreyfingu rafmagns. Mjög áhugaverð hugmynd sem að auki framkallar áhrifamikla mastursgerð. Betur hefði mátt vinna með tengingu láréttu slánna við megin burðarvirki.
Tæknileg umsögn: Tillagan er efnisminni en verður í raun. Fyrirkomulag leiðara og upphengis hagkvæmt með tilliti til rafsegulsviðs.

The proposal attempts to interpret the wave motion of electricity. A very interesting idea that, in addition, evokes a powerful type of tower. More work could have been put into the connection of the horizontal crossbar with the main support structure.
Technical opinion: The proposal is flimsier than it will actually be. The arrangement of power lines and their suspension are advantageous with respect to the electromagnetic field.

Tillaga 44 merkt 12907

Yun Il Kim
Kyungah Shin
England



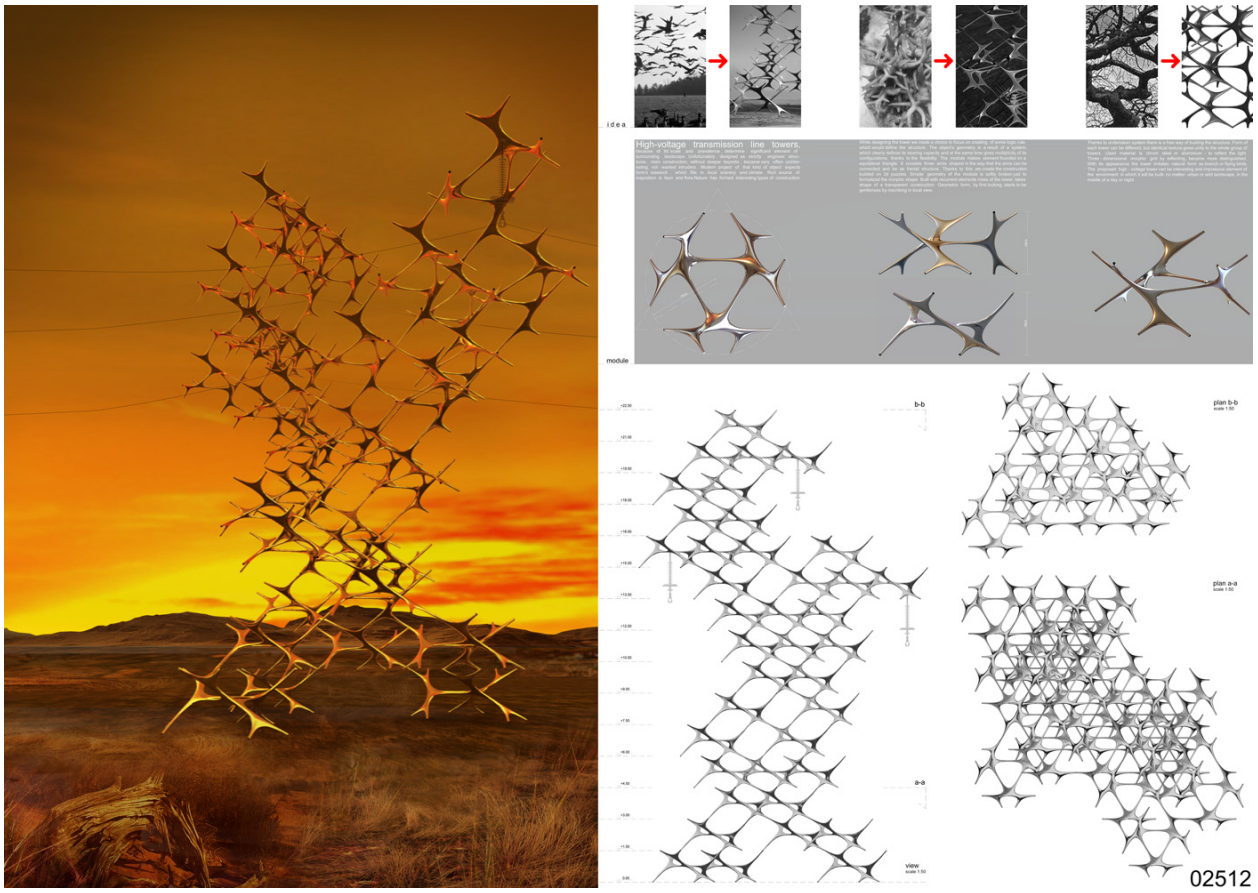


Virðingarverð tillaga sem náttúruvæðir þekkta línugerð.
Tæknileg umsögn: Gróður nálægt leiðurum er ekki æskilegur sökum hættu á útleysingu.

A respectable proposal that naturalizes a known type of line.
Technical opinion: Vegetation near power lines is not desirable because of the risk of power outage.

Tillaga 45 merkt 02512

Silwester Staniucha
Agata Staniucha
Pólland

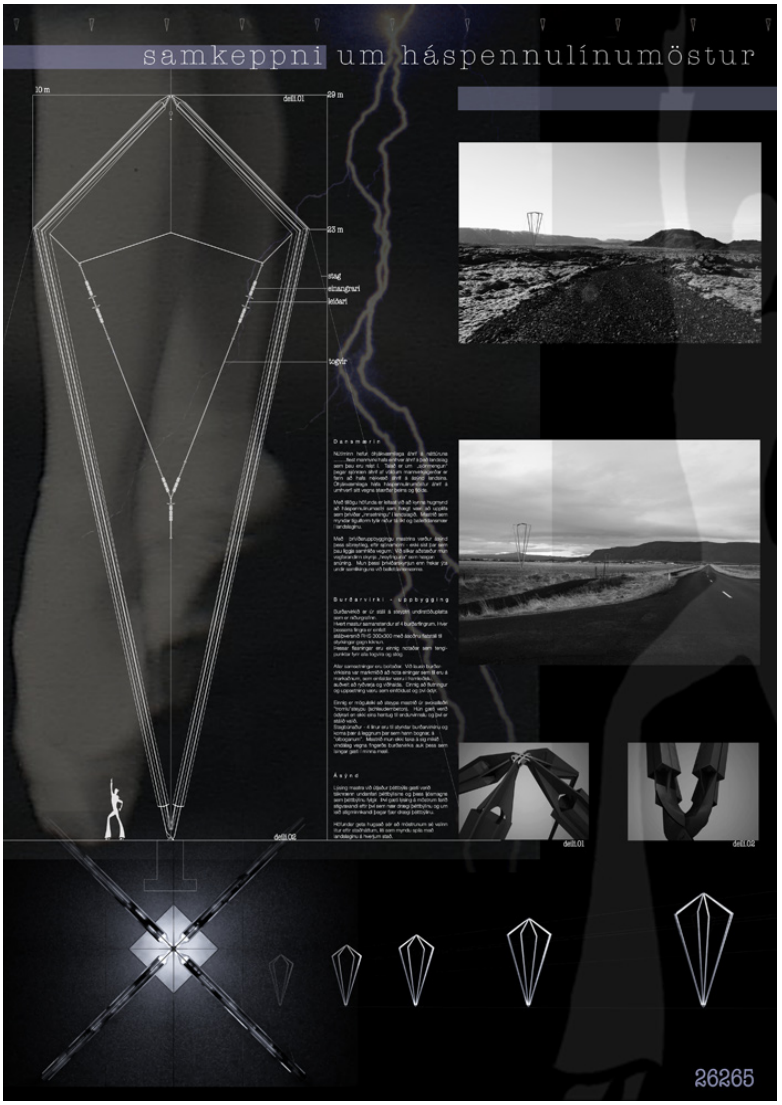


Augnablikið fryst í tíma eða beinagrind umbreytinga. Þessi tillaga hefur sterka skírskotun til framtíðar og tækni, en er um leið í fullkomnu jafnvægi við náttúruna enda minnir uppbygging á ýmis lífræn og ólífræn form náttúrunnar. Helst mætti gagnrýna tengingar við raflínur og ef til vill hefði styrkur tillögunnar getað falist í nýsköpun annarra hluta en burðarvirkis.
Tæknileg umsögn: Raffræðileg hönnun ekki í lagi þar sem fjarlægð milli leiðara og burðarvirkis er ekki næg við útsveiflu leiðara í vindi. Burðarvirkið er flókið.

The blink of an eye frozen in time or a skeleton of transformations. This proposal makes a strong reference to the future and technology, while at the same time being in perfect balance with nature since the structure is reminiscent of various organic and inorganic forms of nature. The main criticism could be of the drawings of electric lines, and perhaps the proposal's strength lies in the innovation of things other than the support structure.
Technical opinion: The electrical design is not satisfactory since the distance between the power lines and support structure is insufficient for the wind movement of power lines. The support structure is complex.

Tillaga 46 merkt 26265

Skapa & Skerpa arkitektar ehf
Elín G. Gunnlaugsdóttir, arkitekt fssa, faí
Jóhann Sigurðsson, arkitekt fssa, faí
Nicoló Sandri, arkitektanemi
Meðhöfundur: Almenna verkfræðistofan, Sigurður Gunnarsson, Dr.-Ing. byggingarverkfræðingur Ísland

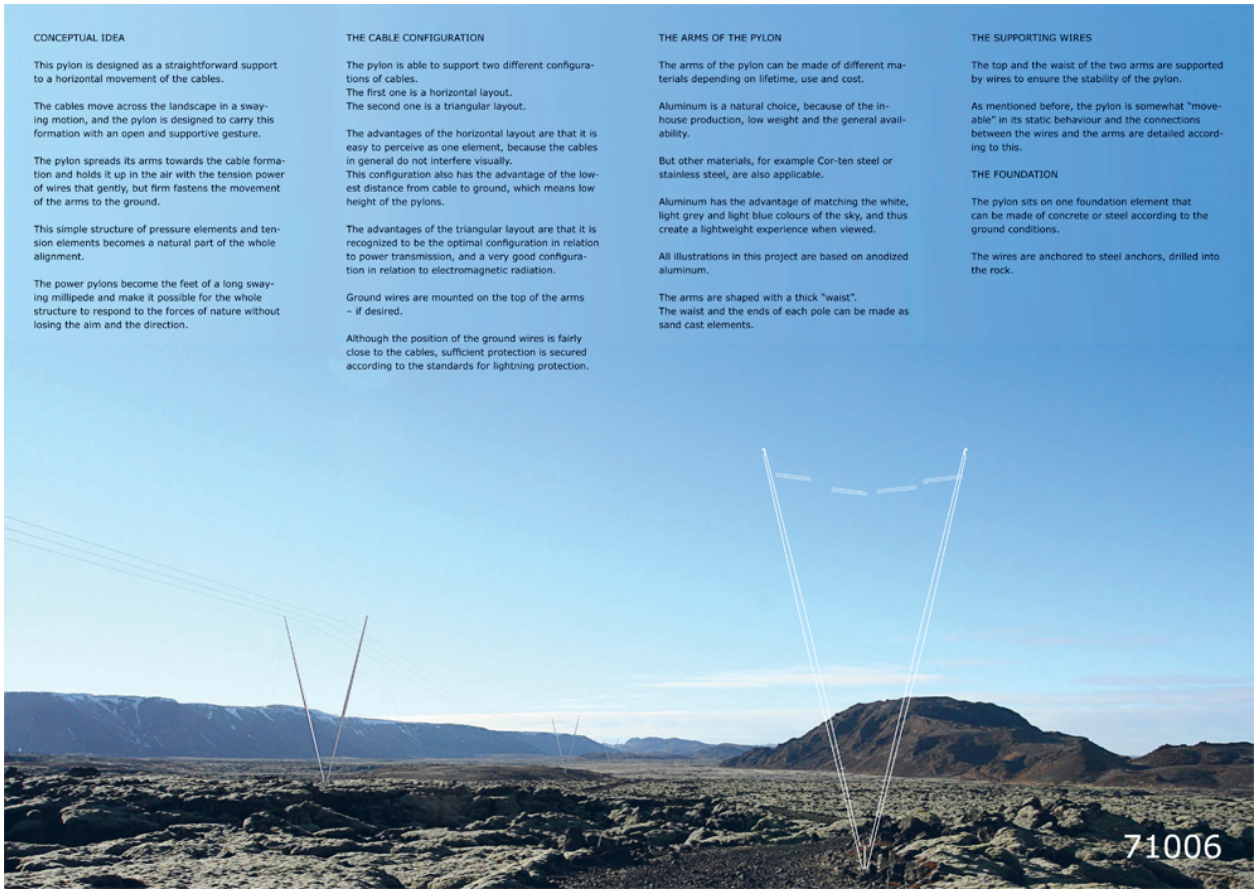


Vel framsett hugmynd. Létt, sérstæð og frumleg tillaga.
Tæknileg umsögn: Skoða þarf raffræðilega hönnun með tilliti til fjarlægða frá leiðurum í burðarvirki. Fyrirkomulag leiðara hagstætt út frá rafsegulsviði. Þarf að þróa áfram með tilliti til rekstraröryggis og persónuöryggis.

Well-presented idea. Light, unusual and original proposal.
Technical opinion: Electrical design regarding distances from power lines in the support structure must be examined. The arrangement of power lines is advantageous regarding the electromagnetic field. Further development is necessary with respect to operational and personal security.

Tillaga 47 merkt 71006

BYSTRUP ARCHTECTS AND DESIGNERS
Burðarþol: Ramboll A/S, Ulrick Støttrup Andersen
Vindur: Svend Ole Hanse
Efnisval: Richard Aagaard
Danmörk

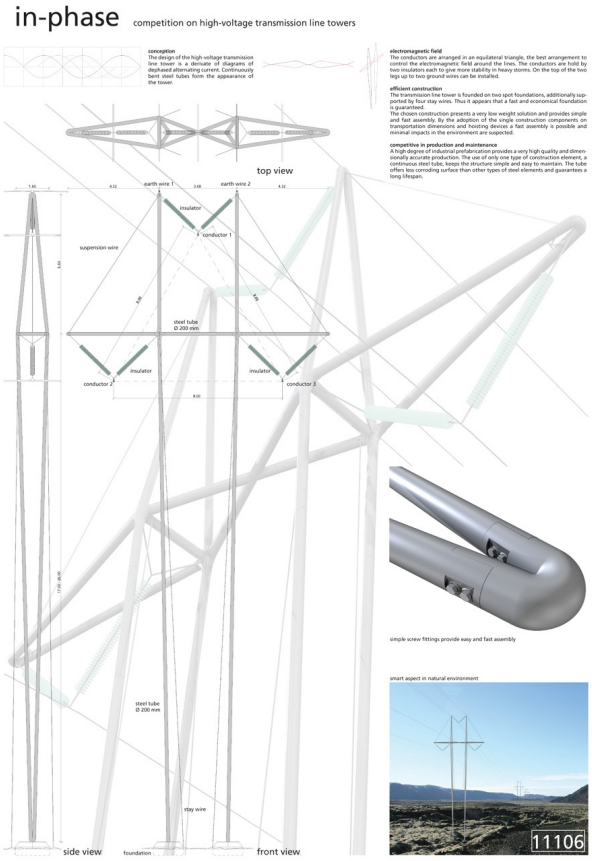


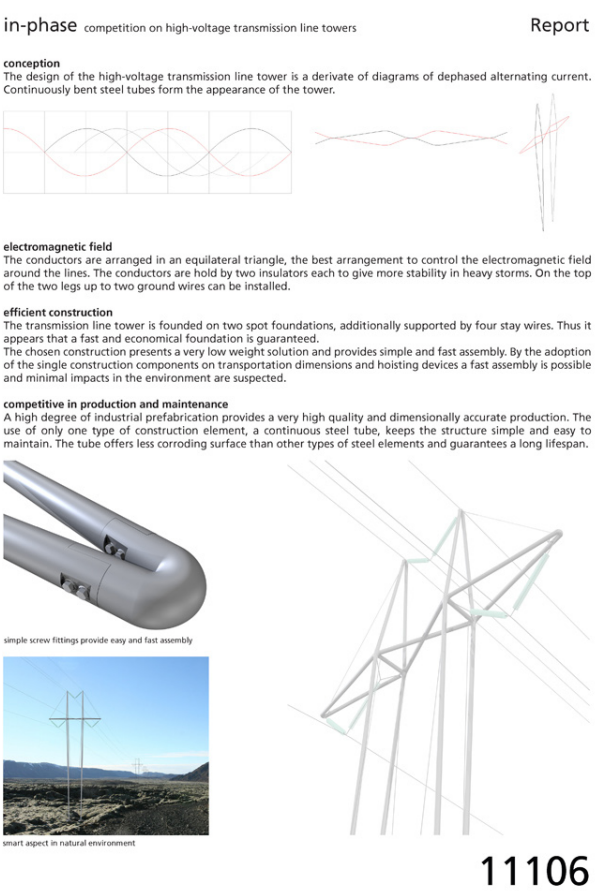
Mjög vel framsett tillaga. Létt og nánast ósýnilegt yfirbragð fellur vel að landi.
Tæknileg umsögn: Tæknilega þekkt lausn.

Very well-presented proposal. The light and nearly invisible look blends well with the land.
Technical opinion: Technically known solution.

Tillaga 48 merkt 11106

franken Architekten GmbH
Bernhard Franken
Frank Brammer
Carsten Trojan
Þýskaland



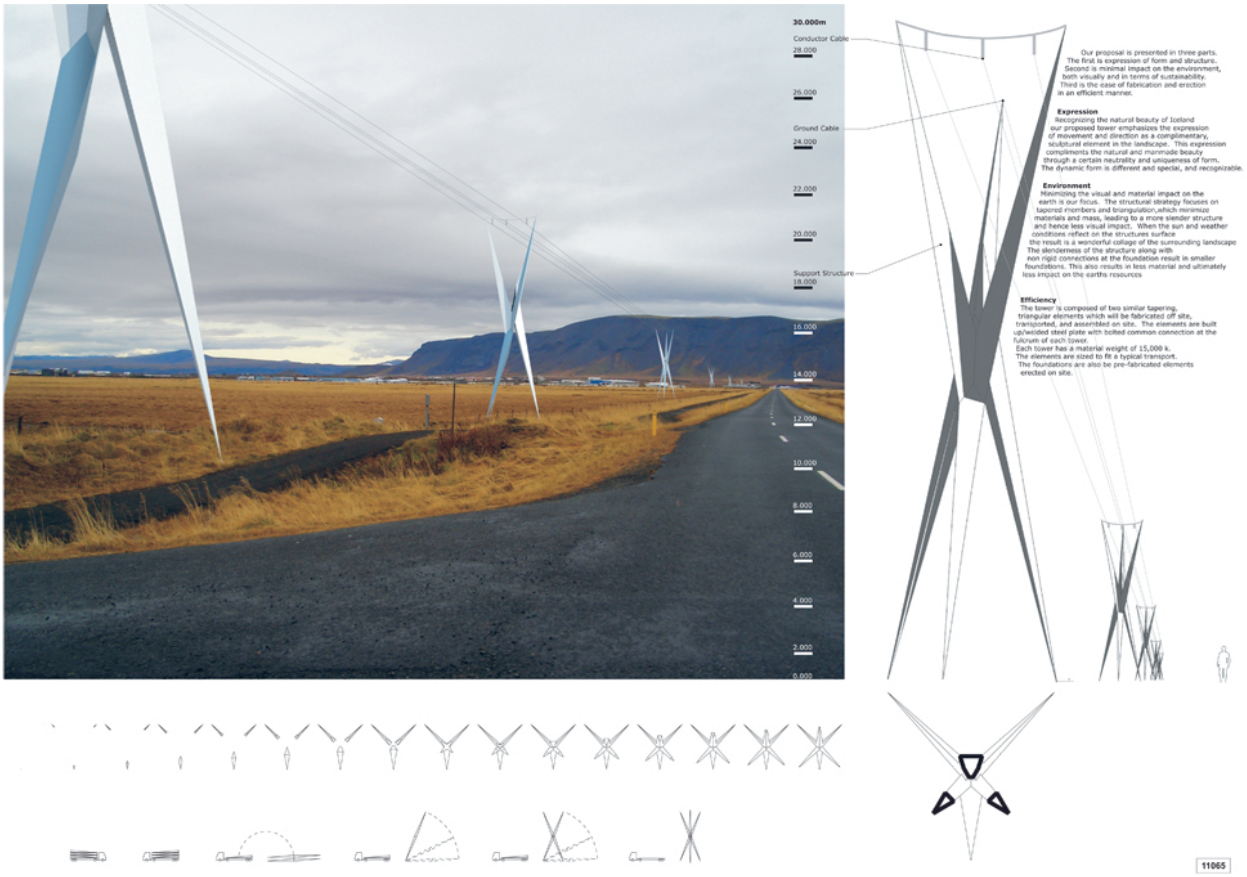


Vel framsett tillaga og mikið unnin með léttu ívafi.
Tæknileg umsögn: Tæknilega framkvæmanleg. Fyrirkomulag leiðara og upphengi hagkvæm út frá rafsegulsviði.

Well-presented proposal and much done with a light weft.
Technical opinion: Technically doable. Arrangement of power lines and their suspension are advantageous regarding the electromagnetic field.

Tillaga 49 merkt 11065

eSolutions environmental design
Hönnunarteymi: Christopher T. Staggs, Nadim Itani, Randy Leach, Carl Cornilsen,Alice Hovsepian Bandaríkin



Geysifallegt burðarvirki sem minnir á kristalla. Léttleiki og nánast þyngdarleysi einkennir tillöguna. Ekki hægt að efast um listrænt gildi hennar, þó er óvíst um útfærslu hennar þegar taka þarf tillit til hinna tæknilegu þátta.
Tæknileg umsögn: Burðarvirki þarf að þróa mikið áður en þetta telst raunhæf lausn. Einnig þarf að þróa betur hvernig leiðarar eru hengdir upp með tilliti til fjarlægða í burðarvirki.

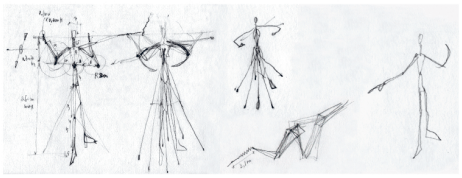
Extremely beautiful support structure reminiscent of crystals. Lightness and nearly weightlessness characterizes the proposal.Its artistic value cannot be doubted although its implementation is uncertain regarding technical aspects.
Technical opinion: The support structure requires a great deal of development, but this is deemed a realistic solution. Better development is also needed of how power lines are hung with regard to distances in the support structure.

Tillaga 50 merkt 38000
Viðurkenning

Choi+Shine Architects, LLC.
Thomas Shine
Jin Choi
Bandaríkin

PYLON COMPETITION

Landsnet: Competition on high-voltage transmission line towers



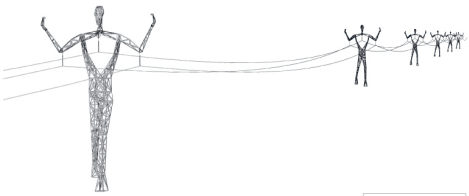
Early sketches

Giacometti, City Square

This design transforms mundane electrical pylons into statues on the landscape.

Making only minor alterations to well established steel-framed tower design, we have created a series of towers that are powerful, solemn and variable. These iconic pylon-figures will become monuments in the landscape. Seeing the pylon-figures will become an unforgettable experience, elevating the towers to something more than merely a functional design of necessity.

The pylon-figures can be configured to respond to their environment with appropriate gestures. As the carried electrical lines ascend a hill, the pylon-figures change posture, imitating a climbing person. Over long spans, the pylon-figure stretches to gain increased height, crouches for increased strength or strains under the weight of the wires.



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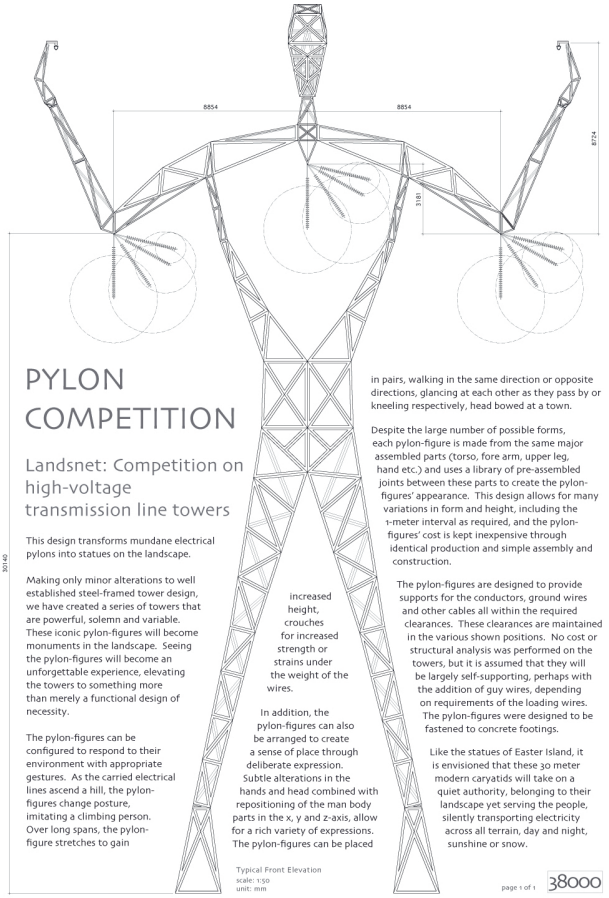

PYLON COMPETITION

Landsnet: Competition on high-voltage transmission line towers

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increased height, crouches for increased strength or strains under the weight of the wires.

In addition, the pylon-figures can also be arranged to create a sense of place through deliberate expression. Subtle alterations in the hands and head combined with repositioning of the man body parts in the x, y and z-axis, allow for a rich variety of expressions. The pylon-figures can be placed in pairs, walking in the same direction or opposite directions, glancing at each other as they pass by or kneeling respectively, head bowed at a town.

Despite the large number of possible forms, each pylon-figure is made from the same major assembled parts (torso, fore arm, upper leg, hand etc.) and uses a library of pre-assembled joints between these parts to create the pylon-figures' appearance. This design allows for many variations in form and height, including the 1-meter interval as required, and the pylon-figures' cost is kept inexpensive through identical production and simple assembly and construction.

The pylon-figures are designed to provide supports for the conductors, ground wires and other cables all within the required clearances. These clearances are maintained in the various shown positions. No cost or structural analysis was performed on the towers, but it is assumed that they will be largely self-supporting, perhaps with the addition of guy wires, depending on requirements of the loading wires. The pylon-figures were designed to be fastened to concrete footings.

Like the statues of Easter Island, it is envisioned that these 30 meter modern caryatids will take on a quiet authority, belonging to their landscape yet serving the people, silently transporting electricity across all terrain, day and night, sunshine or snow.

Typical Front Elevation
scale: 1:50
unit: mm

page 1 of 1

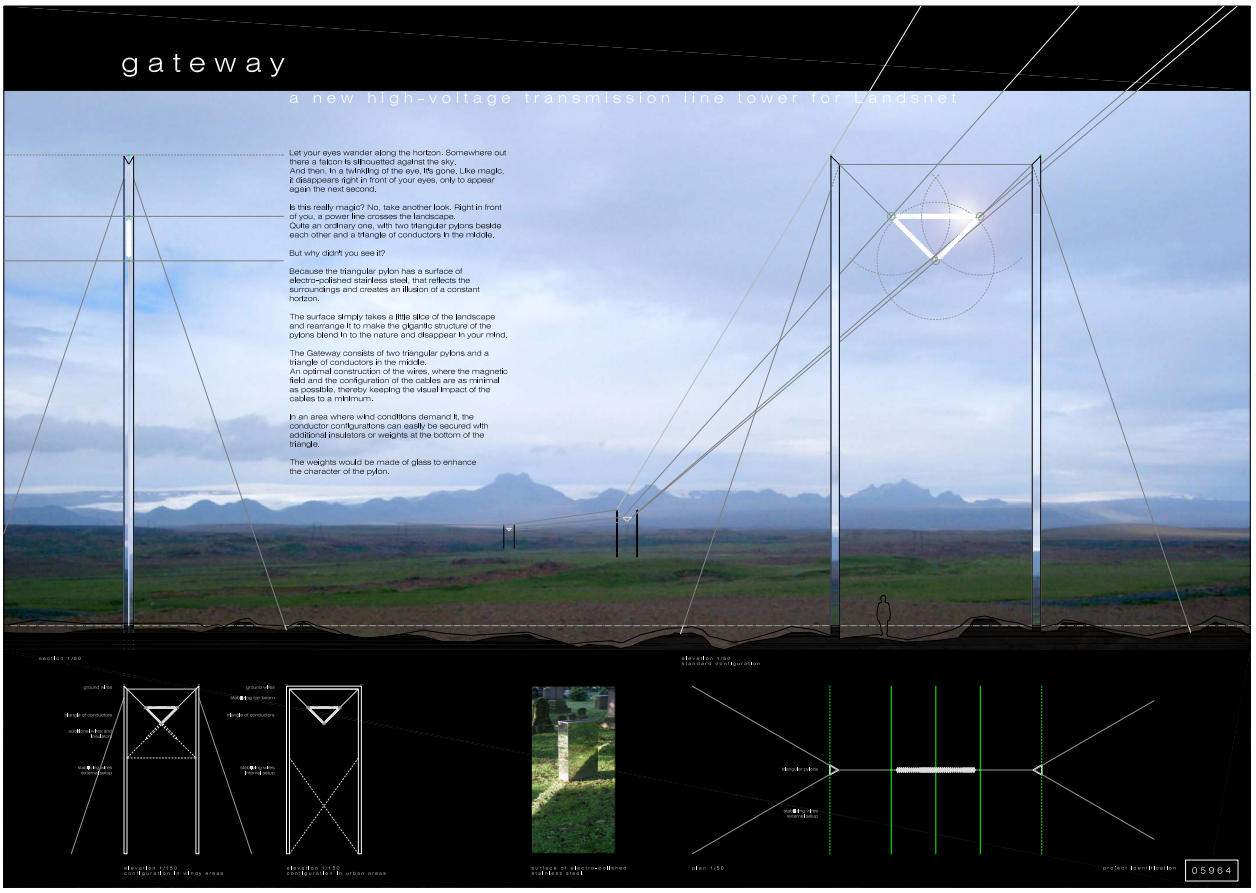
38000

Smellin hugmynd sem tilvitnun til risa í þjóðsögum og vélmenna nútímans.
Tæknileg umsögn: Tæknilega möguleg. Burðarkerfi þarf að vinna áfram.

An ingenious idea as a reference to giants in folktales and robots in modern times.
Technical opinion: Technically possible. The support system requires more work.

Tillaga 51 merkt 05964
Viðurkenninga

BYSTRUP ARCHTECTS AND DESIGNERS
Burðarþol: Ramboll A/S, Ulrick Støttrup Andersen
Vindur: Svend Ole Hanse
Efnisval: Richard Aagaard
Danmörk



Einstaklega einföld en þaulhugsuð tillaga. Hvert mastur yrði sterk listræn upplifun og ekki síst í návígi. Hin fínlega hönnun gerir möstrin nánast ósýnileg úr fjarska nema ef til vill á björtum sólardögum þegar glampar á stálið.
Tæknileg umsögn: Tæknilega möguleg.

Singularly simple but thoroughly thought-out proposal. Each tower would have a strong artistic impact on viewers, not least at close quarters. The delicate design makes the towers nearly invisible from a distance except perhaps on bright, sunny days when the steel will glint.
Technical opinion: Technically possible.

Tillaga 52 merkt 96833
Athyglisverð tillaga

STUDIO BEDNARSKI Ltd.
Arkitektar: Cezary M. Bednarski , Raffaele Damiano , Domenico Procopio
Burðarþolshönnun: Flint & Neill Partnership, London
England

Þetta mastur er afar einfalt í uppbyggingu, þó virðist liggja mikil þróun að baki útfærslunnar. Sjálft mastrið sækir styrk sinn í innri spennu.
Tæknileg umsögn: Þekkt lausn en þróa þarf betur hvernig leiðarar eru hengdir upp með tilliti til fjarlægða í burðarvirki. Tillagan er efnisminni en verður í raun.

This tower has an extremely simple structure although a great deal of development seems to underlie the implementation. The tower draws its strength from internal tension.
Technical opinion: A known solution, but better development is also needed of how power lines are hung with regard to distances in the support structure. The proposal is flimsier than it will actually be.

Tillaga 53 merkt 25142

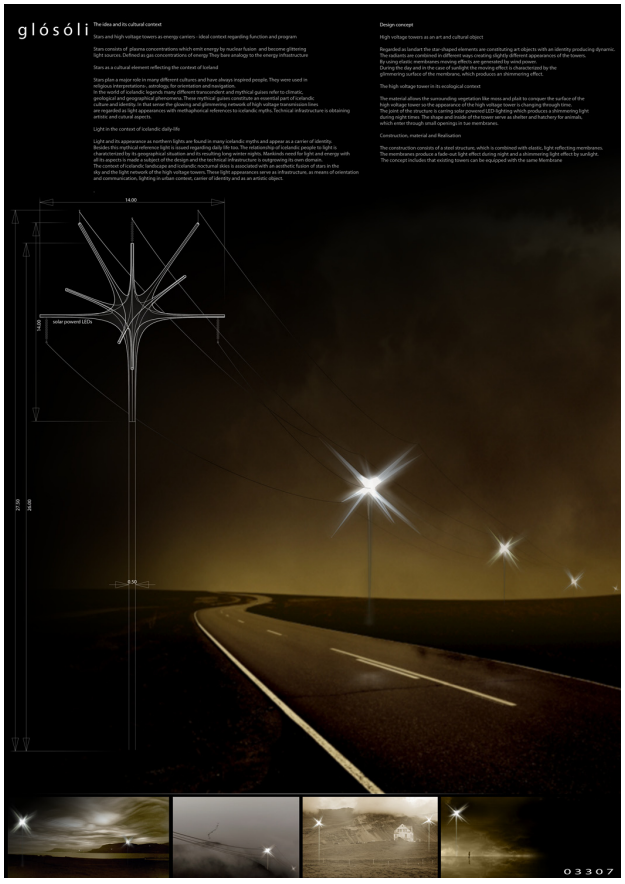
ARCOS Engineering S.r.l.
Christina Zannini Quirini
Giulio Ventura
Ítalía

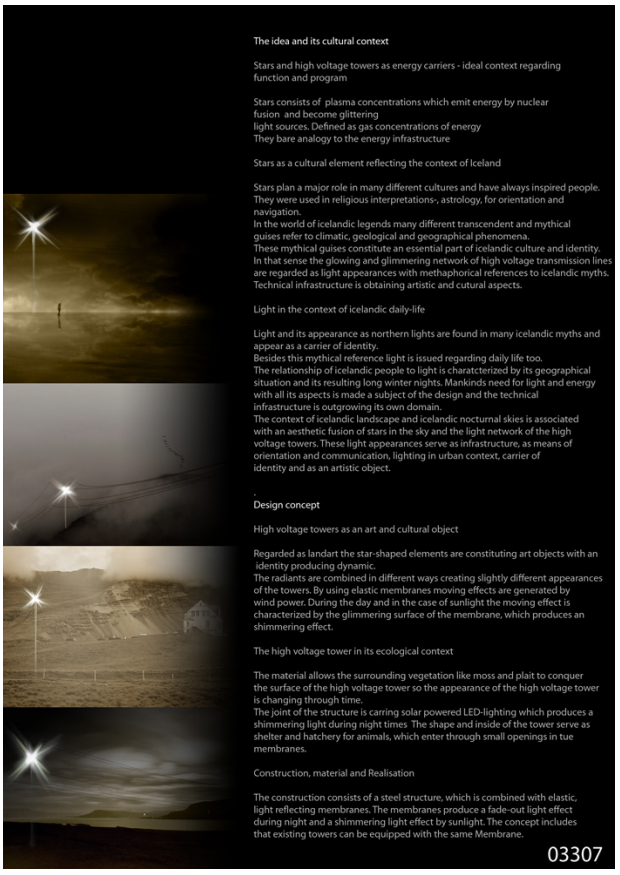
Vel framsett og tæknilega sannfærandi. Áhugaverðar tilraunir til að leysa tæknilega útfærslu, en flókin samsetning ólíkra forma. Einangrun varla raunhæf.
Tæknileg umsögn: Tæknileg útfærsla lítið hugsuð.

Well presented and technically convincing. Interesting attempts to solve technical implementation, but a complex composition of dissimilar forms. Insulation hardly realistic.
Technical opinion: Little thought given to technical implementation.

Tillaga 54 merkt 03307

Christian Flatscher
Christian Precht
Christoph Planer
Florian Niedworok
Austurríki



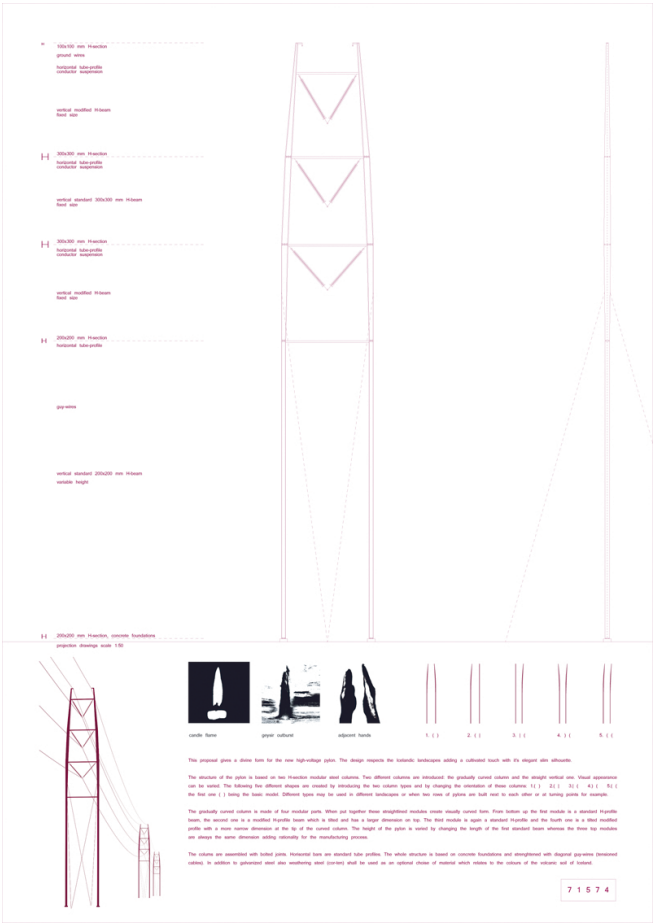


Mjög ljóðræn nálgun sem leiðir hugann að tilgangi rafmagns sem orkugjafa. Það er þó hægt að setja spurningarmerki við tilgang þess að breyta línumöstrum í ljósastaura.
Tæknileg umsögn: Burðarvirkið er ekki úthugsað og upphengi leiðara sömuleiðis.

A highly poetic approach leading thought toward the purpose of electricity as an energy source. A question mark may nevertheless be raised regarding the purpose of changing line towers into lampposts.
Technical opinion: The support structure has not been thought out nor has the suspension of power lines.

Tillaga 55 merkt 71574

Tatu Pärssinen, arkitekt
Matti Pärssinen, hönnuður, nemi
Finnland

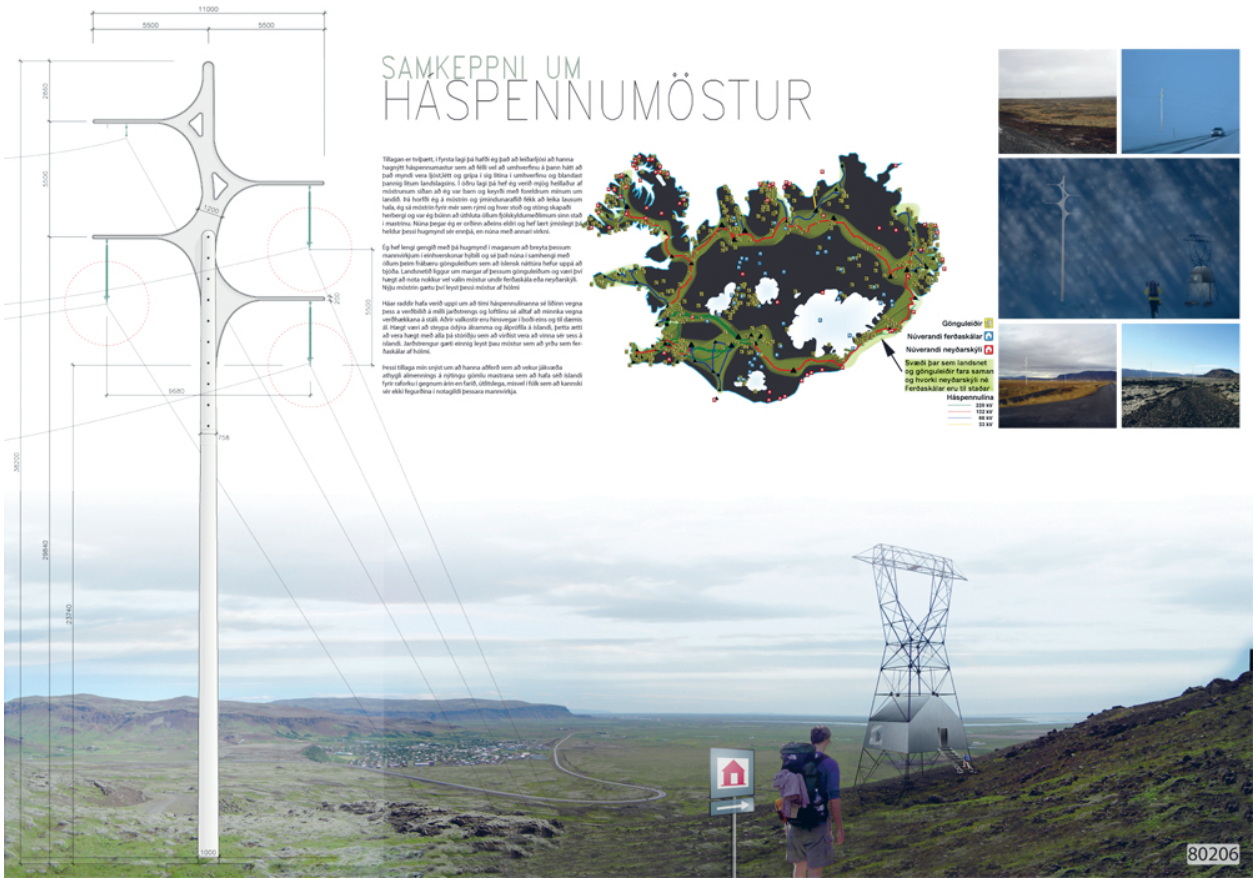


Hefðbundin og nokkuð há mastursgerð sem er breytt lítillega. Byggð á einfaldri hugmyndafræði.
Tæknileg umsögn: Tæknilega möguleg lausn en þarf að bæta stögun.

A traditional and somewhat high type of tower that has been slightly changed. Based uon simple ideology.
Technical opinion: Technically possible solution, but guy wires must be added.

Tillaga 56 merkt 80206
Athyglisverð tillaga

Magnús Freyr Gíslason, arkitekt BA
Danmörk

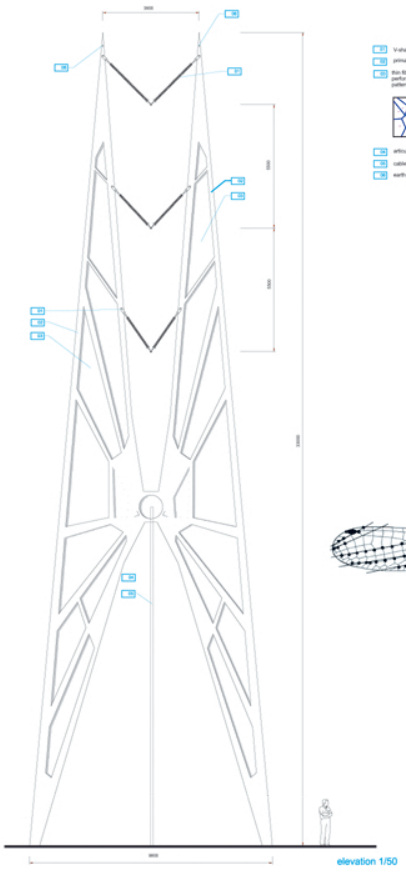


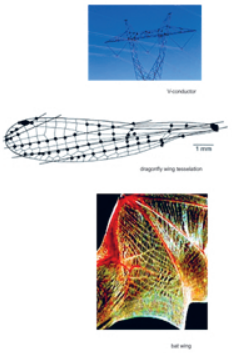
Hugmyndin er tvíþætt. Annars vegar ágætlega hannað nokkuð nútímalegt mastur og hins vegar smellin hugmynd um nýtingu eldri mastra. Grunnuppbygging nýja mastursins er sáraeinföld en brýtur þó upp hina hefðbundnu gerð mastra. Útfæra mætti betur ímyndaða áltrjákrónu og tengingu hennar við meginburðarvirki.
Tæknileg umsögn: Tæknilega möguleg lausn en þarf að bæta burðarkerfi arma sem halda uppi einangrakeðjum. Fyrirkomulag leiðara og upphengi hagkvæm út frá rafsegulsviði.

The idea is two-pronged: on one hand, a well-designed, somewhat modern tower and, on the other, an ingenious idea on the utilization of older towers. The basic structure of the new tower is extremely simple although it breaks up the traditional type of tower. The imagined aluminium tree crown and its connection with the main support structure could be better implemented.
Technical opinion: Technically possible solution, but arms must be added to the support system to hold up insulation suspensions. Arrangement of power lines and their suspension are advantageous regarding the electromagnetic field.

Tillaga 57 merkt 79543

Dirk Krolikowski
Falko Schmitt
England





Proposal for a fiber-reinforced double concrete pylon

The proposal in form of a fiber-reinforced double concrete pylon represents an integrated and innovative solution to the competition brief by means of introducing a high performance material being optimized by generative computational design tools. The objective of the proposal is to design a highly efficient structure that saves material and therefore presents an environment friendly solution inheriting design principles from nature.

1.0 Optimisation through principles of nature

The wing of a Dragonfly and its inherent logic was first described by the Russian mathematician Georgy Voronoi in 1908. The so called Voronoi tessellation as a structural decomposition strategy of space can be observed in nature . The structure of leaves or vein structures of a bat wing are composed based on those principles, presenting an extremely efficient and material frugal strategy refined by nature over millions of years. Informed by these quite simple algorithms the structure of the pylon will be developed with latest generative computational tools that will allow refining the structure to the degree of the optimization of a dragonfly wing. The known principles of nature are applied while analyzing the behavior and structural performance of the material at the same time to simulate evolution with the computer.
The currently shown pylon is not the final product, rather a 'point in time' that will go through further optimizing cycles according to the established principles, to refine and tune the current proposal and to find the best possible solution.
To mitigate issues arising from the imposed wind loads of the pylon shape, the central concrete membrane will be perforated according to the generated tessellation patterns to simultaneously reduce weight and minimize use of material.
The final precast product will in its sculptural appearance remind of the mentioned structures (dragonfly / bat wing, leaf skeleton) and will share the same aesthetic.

2.0 The material

Concrete itself is an inherently durable material capable of maintaining its desired engineering properties under conditions of extreme exposure (offshore). Through the introduction of (glass) fiber-reinforced concrete the performance of the material will be further enhanced reducing component sizes to a minimum and mitigating corrosion protection issues. Fiber- concrete's inherent durability leads to reliability, resulting in a pylon with minimal maintenance requirements throughout its service life.
The low amount of embodied energy, characteristic for this material, is as environmentally friendly as the 100% recyclability , with options including reuse of structural units or material crushing to provide what is now an industry-accepted aggregate source.
Concrete pylons are currently found predominantly in Germany with operating voltages of up to 380kV and 59 m height. Also concrete has become a favored material for offshore wind farm pylons. The vertical arrangement of the cables generates a slender pylon silhouette. This is facilitated by V-shaped conductors (minimizing cable sway) which are often used in Russian pylon systems. Reducing cable sway may also decrease the overall amount of necessary pylons.

Borrowing principles from nature and using clever high performance materials leads to a highly efficient structure that will be unique amongst the currently existing power lines.

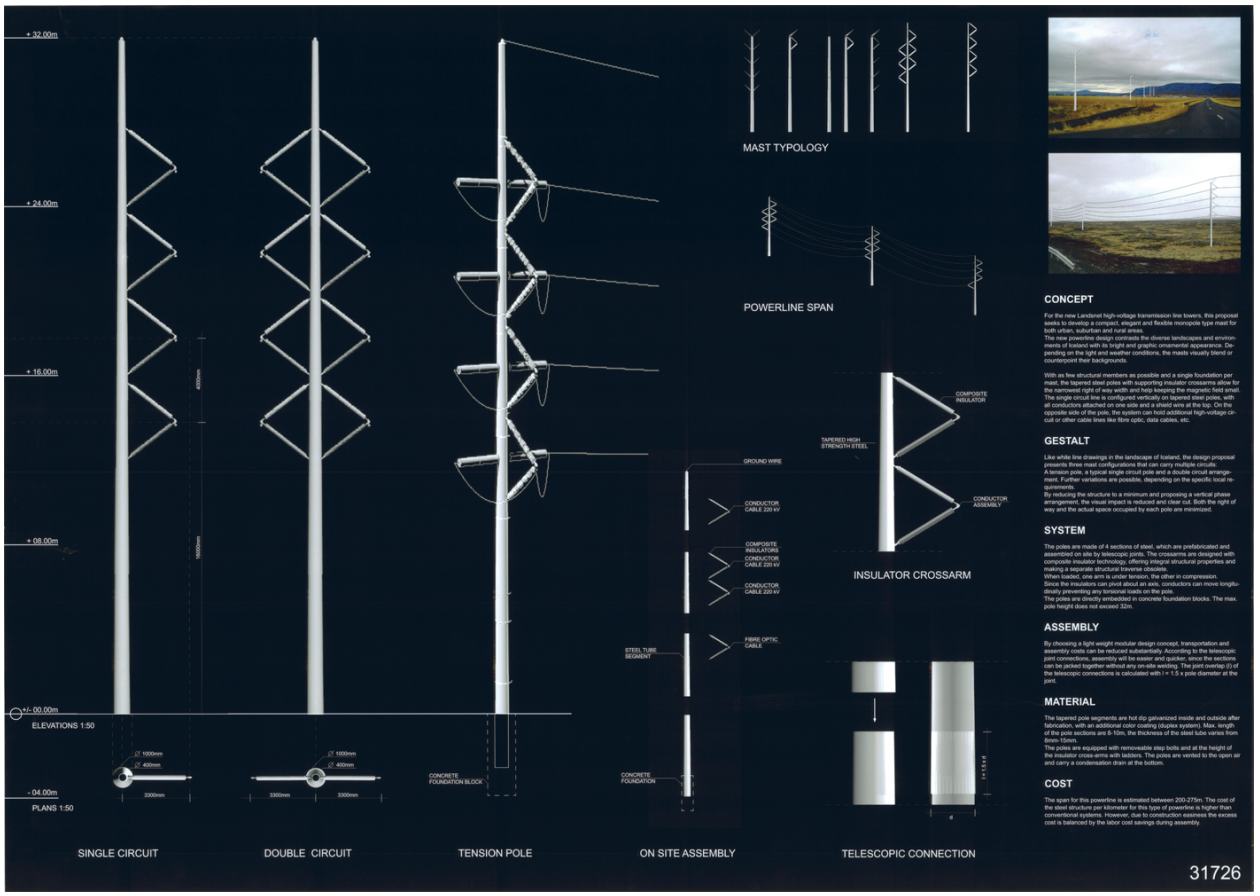
79543

Ævintýraleg og listræn útfærsla á mastri. Mikil sjónræn áhrif.
Tæknileg umsögn: Skoða þarf raffræðilega hönnun með tilliti til fjarlægða frá leiðurum í burðarvirki. Fyrirkomulag leiðara hagstætt út frá rafsegulsviði.

An adventurous and artistic implementation of tower. Great visual impact.
Technical opinion: Electrical design regarding distances from power lines in the support structure must be examined. The arrangement power lines is advantageous regarding the electromagnetic field.

Tillaga 58 merkt 31726

Leonore Daum, arkitekt
Sviss

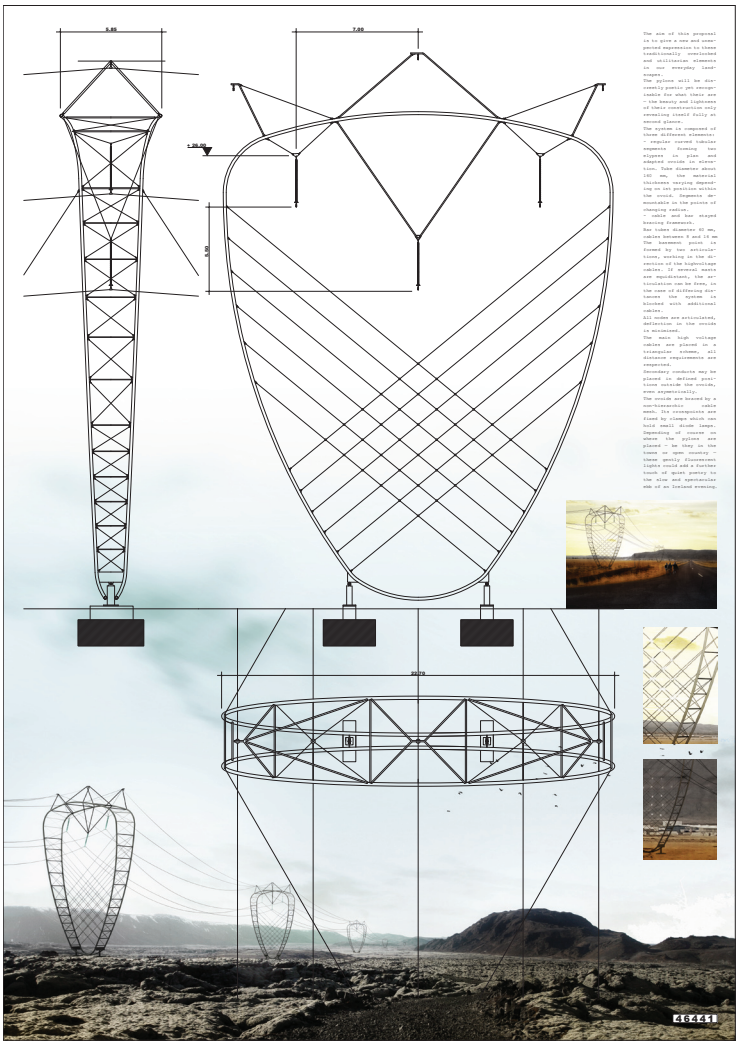


Vel fram sett, einföld og umhverfisvæn.
Tæknileg umsögn: Þekkt form. Fyrirkomulag leiðara hagstætt út frá rafsegulsviði.

Well-presented, simple and environmentally sound.
Technical opinion: Known form. The arrangement of power lines is advantageous regarding the electromagnetic field.

Tillaga 59 merkt 46441

Niclas Dünnerbacke, architect bda
Samstarfsaðilar: Xaviére Bouyer, architect dplg, RFR, verkfræðiráðgjöf
Rémy Bardin, 3-D drawings
Frakkland

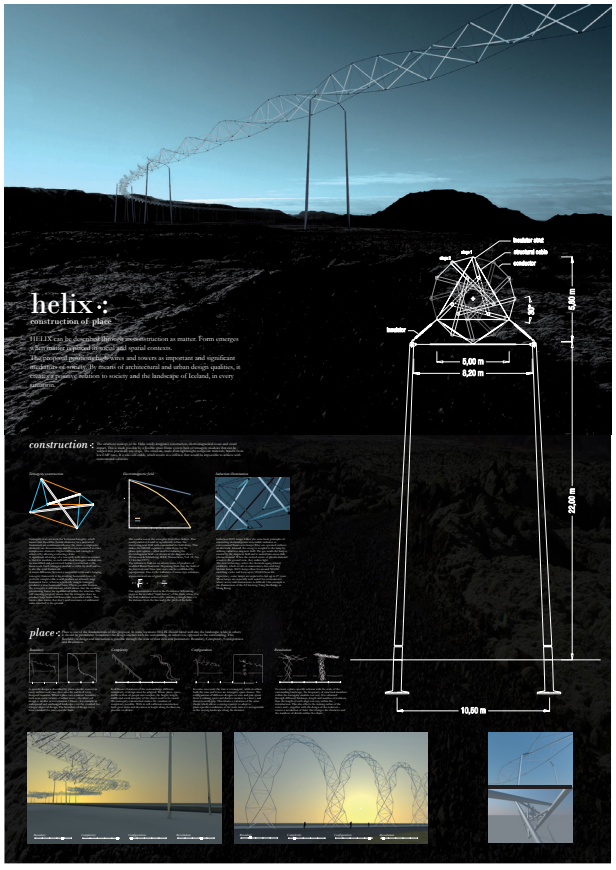


Góð framsetning en flókið mannvirki.
Tæknileg umsögn: Þessi lausn er burðarþolslega nokkuð flókin og þyrfti að þróa betur ásamt upphengi einangrakeðja.

Good presentation, but a complex structure.
Technical opinion: The load bearing capacity aspect of this solution is somewhat complex and would require further development along with the hanging of insulation suspensions.

Tillaga 60 merkt 11895

SWECO Arkitekter
Björn Ekelund, Fredrik Nordh, Anna Åkerberg
Rosenbergs Arkitekter
Benjamin Melin Mandre
SWECO AVIST: August Wiklund
KHT Strukturmekanik: Gunnar Tibert
Svíþjóð

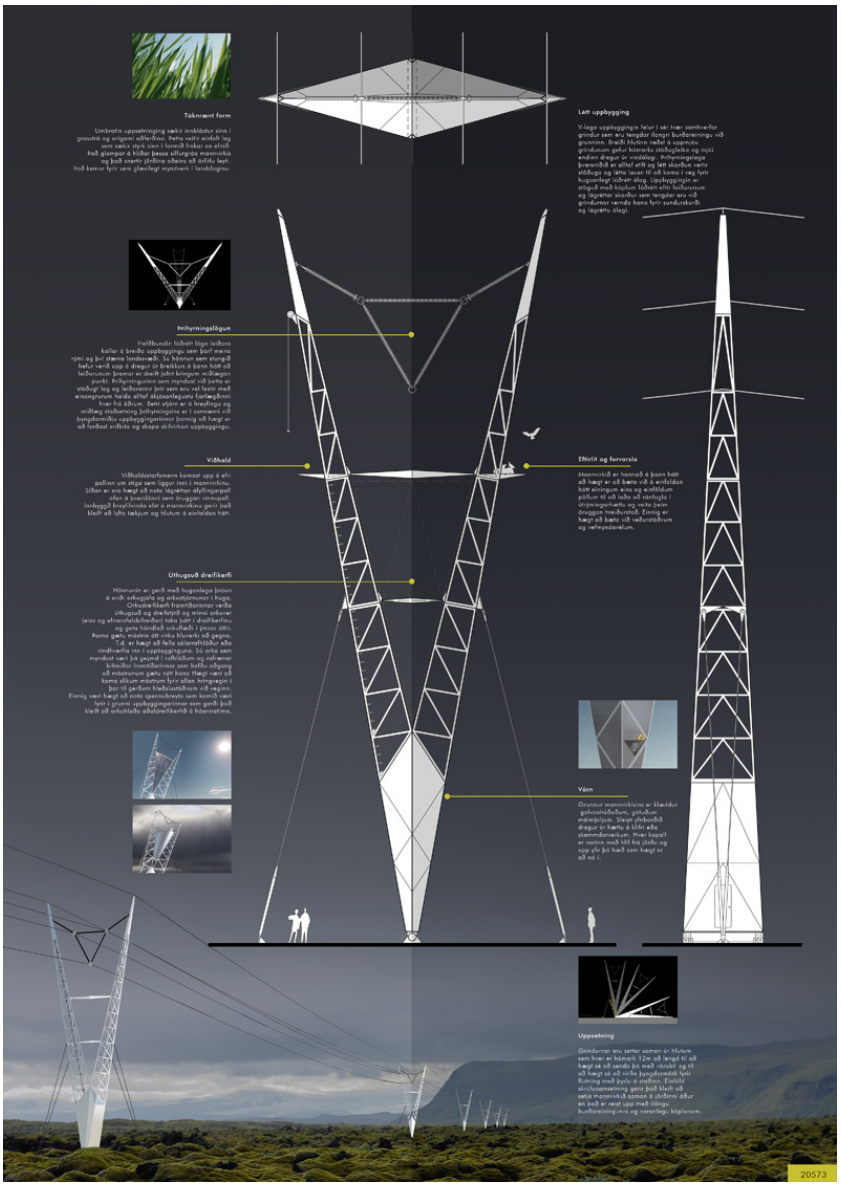


Listræn framsetning, djörf tillaga sem vinnur með flutning rafmangs með táknrænum hætti.
Tæknileg umsögn: Burðarkerfi ekki raunhæft.

An artistic presentation, a bold proposal that works through symbolic transport of electricity.
Technical opinion: The support system is not realistic

Tillaga 61 merkt 20573

Daniel Goldberg
England

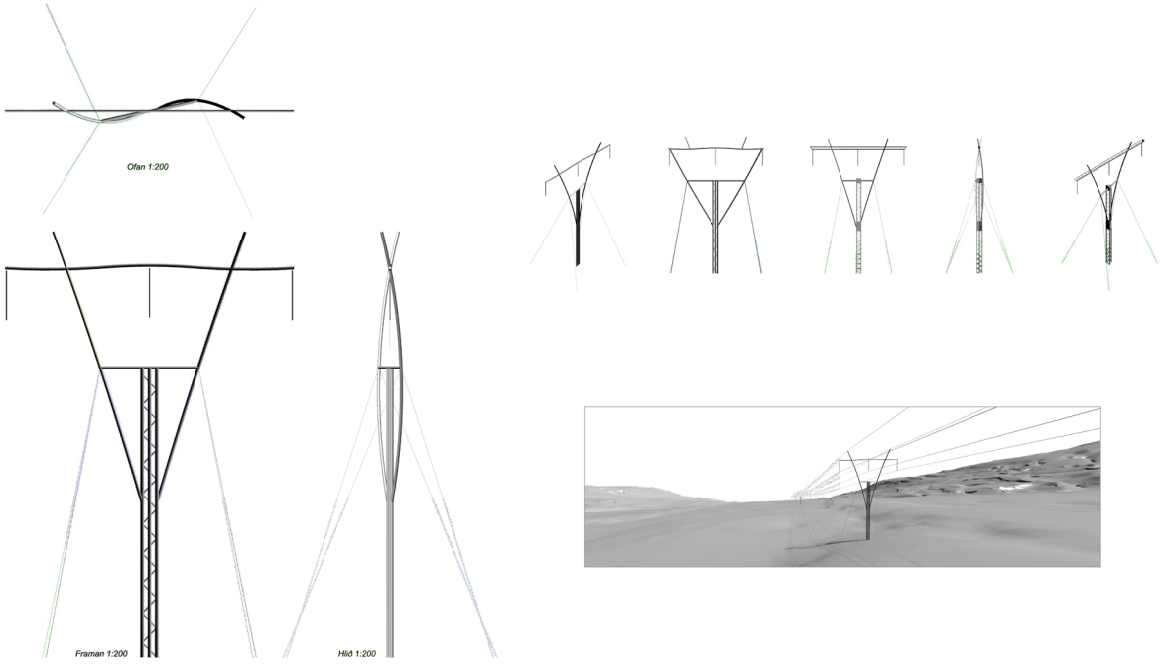


Vel framsett og skýr tillaga. Uppbygging mastursins er mjög markviss og vel leyst. Meðal annars með tilliti til burðarþols og sjónrænna áhrifa. Tilvísun til náttúruforma er skýr og án tilgerðar.
Tæknileg umsögn: Stögun mannvirkisins mætti þróa.

Well-presented and clear proposal. Structure of the tower is very purposeful and well solved. Among other things, with respect to load bearing capacity and visual impact. The reference to forms of nature is clear and unaffected.
Technical opinion: The guy wiring of the structure could be developed.

Tillaga 62 merkt 41727

Í Forma ehf.
Unnsteinn Jónsson
Ísland



Þrjú samtengd rör hvíla á steyptri undirstöðu eða klöpp og mynda meginstofn masturs. Út frá stofni greinast tvö sveigð rör, greinar, sem bera efri þverslá, brú, uppi. Leiðarar liggja um einangrara sem hanga niður úr brú. Greinarnar teygja sig áfram upp og mynda jarðvirseyru, festingu fyrir jarðvirsupphengi. Neðri þverslá gengur í gegnum meginstofn efst og út í greinar og tengir þær saman. Fjögur stög sem fest eru við bergbolta eða steyptar staghellur í jörðu tengjast mastri við sitt hvorn enda neðri þverslár, tvö hvoru megin. Hæð mastra er breytileg, frá 17m til 32m undir efri þverslá, og er hæðarbreytileiki í neðri hluta meginstofns þ.e. frá jörðu og upp að þeim stað þar sem greinar sveigjast út frá stofni. Hornmastur er sams konar að öðru leiti en því að þverslár eru lengri og greinar teygja sig út á enda efri þverslár. Byggingarefni masturs er heitsinkhúðað stál og gert er ráð fyrir framleiðslu eininga sem fluttar eru á uppsetningarstað og boltaðar saman. Rör myndar efri þverslá en möguleiki er á stálgrindarslá í stað rörs, einnig er möguleiki á stálgrindarstofni sem meginuppistöðu.

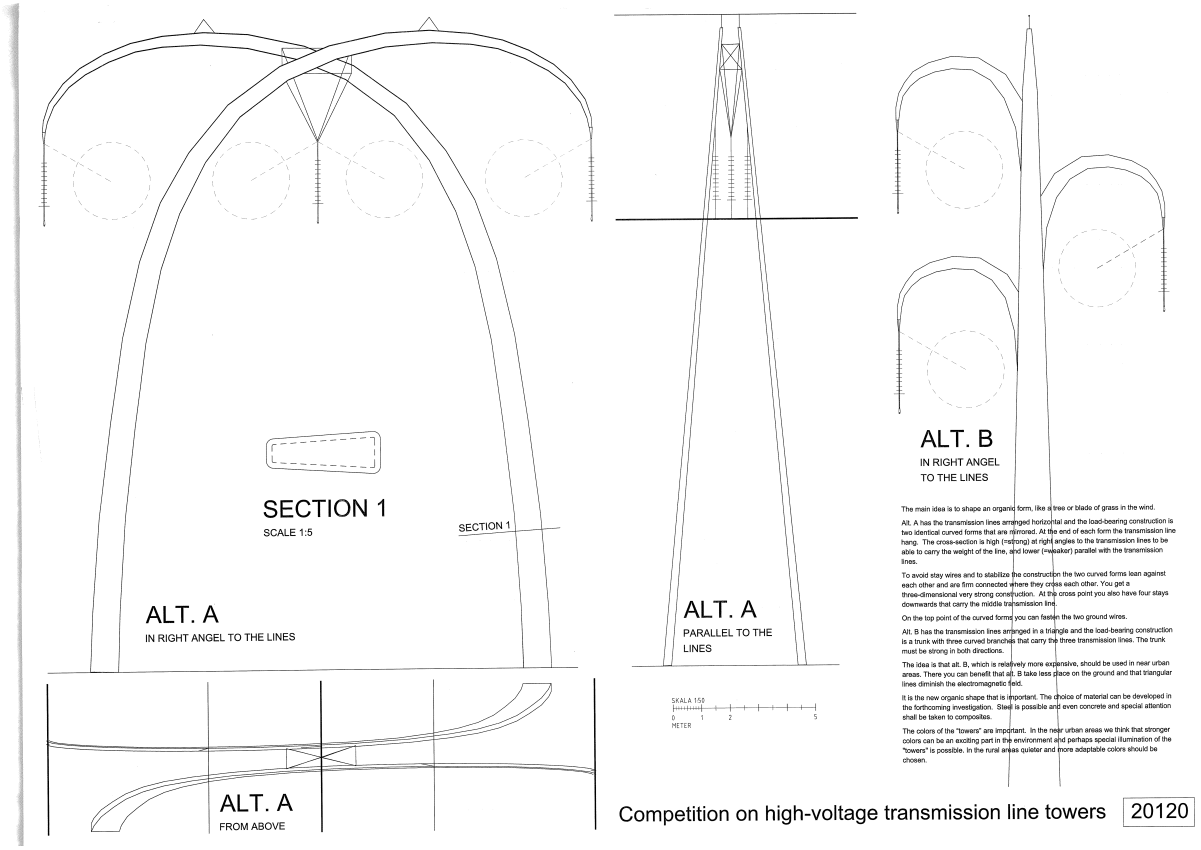
41727

Vel hannað og einfalt mastur. Nokkuð hefðbundið en nýbreytni í einstökum byggingarhlutum og samsetningu þeirra. Tillöguna hefði mátt styðja betur í framsetningu.
Tæknileg umsögn: Stögun mannvirkisins mætti þróa. Þverslá virkar efnislítil.

A well-designed and simple tower. Somewhat traditional, but there is innovation in particular structural parts and their composition. Presentation of the proposal could have been better supported. .
Technical opinion: The guy wiring of the structure could be developed. The crossbar works as flimsy.

Tillaga 63 merkt 20120

Architect Hans Bernhardt
Svíþjóð



Tvær góðar hugmyndir sem vantar fyllingu og nánari útfærslu.
Tæknileg umsögn: Burðarvirkið þarf að þróa áfram. Tillaga B hagkvæm með tilliti til rafsegulsviðs.

Two good ideas needing to be filled out and further implemented.
Technical opinion: The support structure requires further development. Proposal B is advantageous with respect to the electromagnetic field.

Tillaga 64 merkt 62578
Athyglisverð tillaga

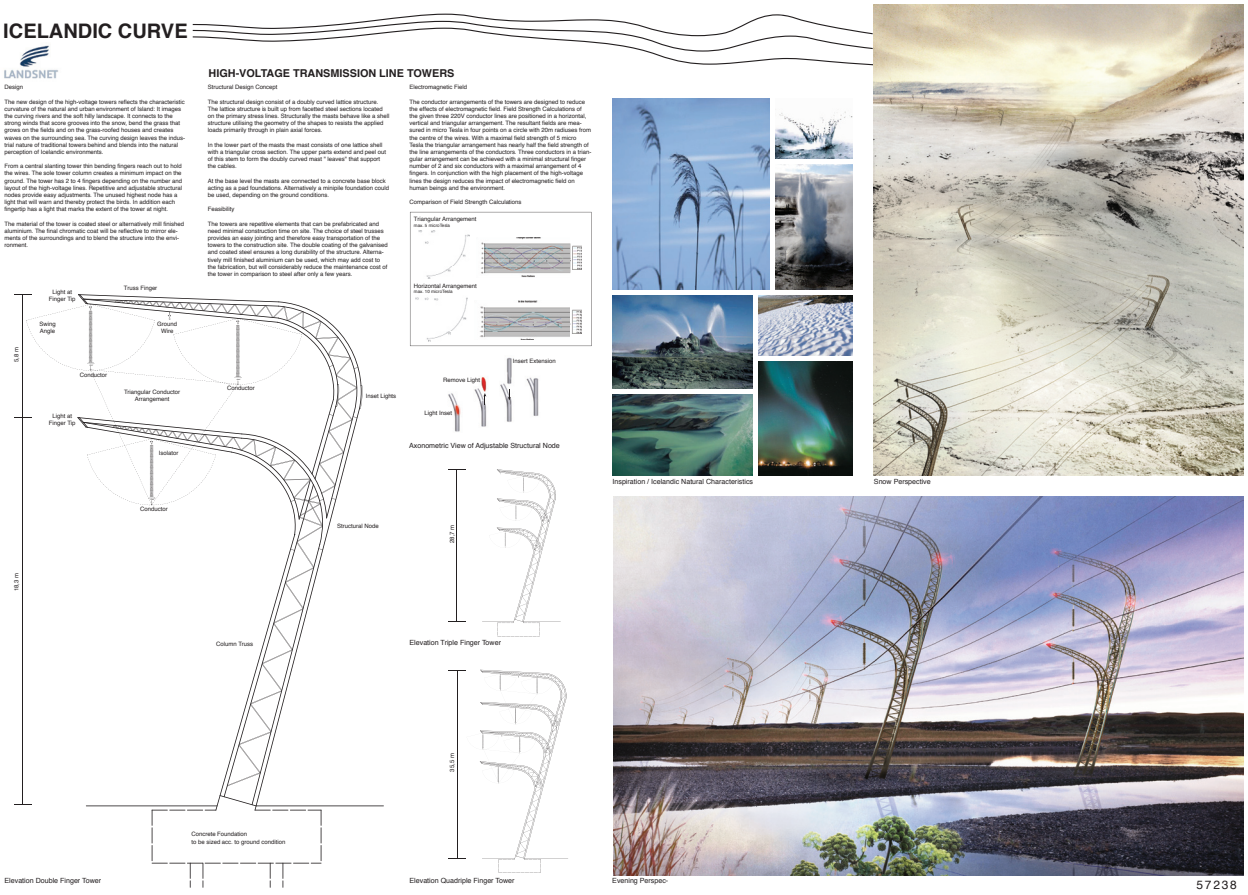
Luca Gandini, arkitekt
Samstarfsaðili: Cicola Actis Tessitore, arkitekt
Ítalía

Mögnuð innlifun í leik forma. Rómantísk tilraun til að tengja vísindi og list saman og leiðir hugann til þess tíma þegar þessar tvær greinar voru nánast fléttaðar saman. Vekur upp spurningar hvernig maðurinn markar sín spor í listrænni túlkun.
Tæknileg umsögn: Burðarvirkið þarf að þróa áfram.

An intense experience in the play of forums. Romantic attempt to link science and art together and direct thought to the time when these two areas were nearly intertwined. Raises questions on how Man marks his path and artistic interpretation.
Technical opinion: The support structure requires further development.

Tillaga 65 merkt 57238

magma architecture, Ostermann & Kleinheinz Architekt & Ausstellungsdesignerin – Parnterschaft, Þýskaland
Hönnunarteymi: Lena Kleinheinz MSc, Dipl.-Ing. , Martin Ostermann Grad. Dipl. Des. (AA)
Anna Pilarska, Sebastian Lippok
Rafmagn: Max Hansen, Danmörk
Burðarþol: Florian Foerster, Þýskaland

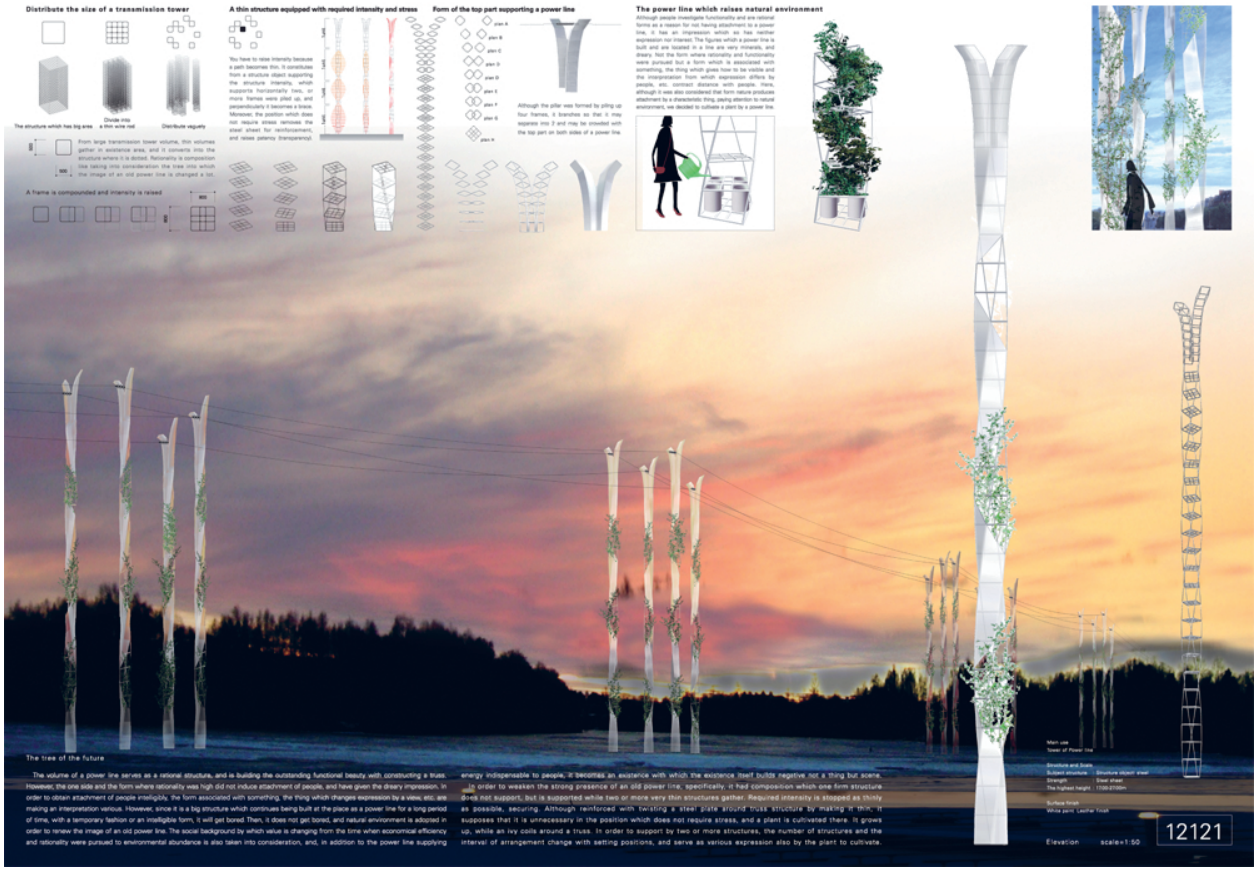


Tillagan er mjög einföld og rökrétt. Hefur sterka tilvísun til náttúrunnar samanber skýringar höfundar. Uppkomin munu háspennulínumöstrin mynda stórfenglegt sjónarspil sem minnir á náttúruöflin með tilvísun til sveigðra grasstöngla í stormi
Tæknileg umsögn: Tæknilega framkvæmanlegt. Breyta þarf staðsetningu jarðvírs.

The proposal is extremely simple and logical. It makes strong reference to nature, cf. the author's explanations. The installed high-voltage towers will form a magnificent visual interplay reminiscent of the forces of nature with reference to stalks of grass bent in a storm.
Technical opinion: Technically doable. The placement of ground wires must be changed.

Tillaga 66 merkt 12121
Athyglisverð tillaga

Kohki Hiranuma
Japan

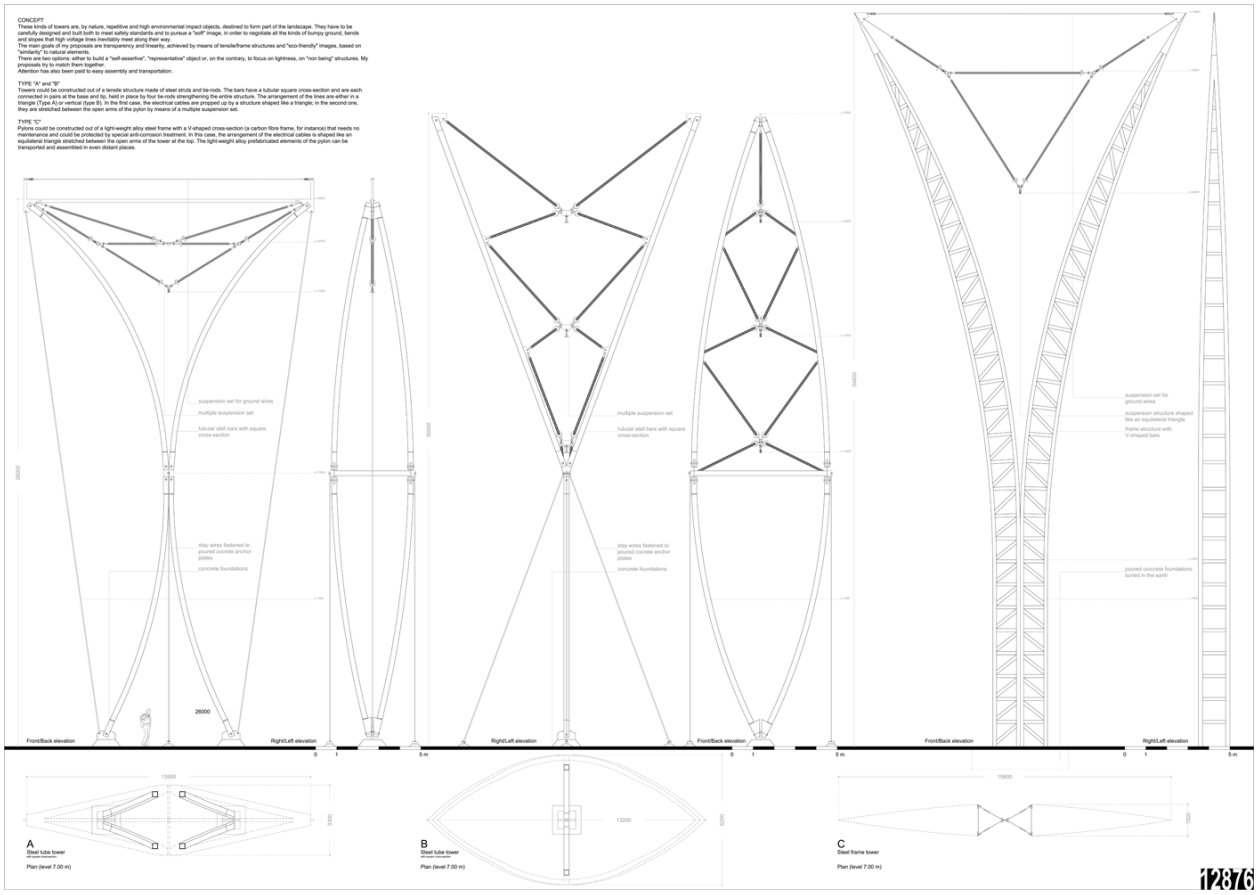


Einstaklega góð og trúverðug framsetning. Tillagan skírskotar til náttúrunnar. Burðarvirkið er létt og sýnilegt. Hugmyndin um að nýta burðarvirkið sem stoðvef fyrir gróður er áhugaverð en erfið í útfærslu.
Tæknileg umsögn. Erfið tillaga út frá burðarþoli og raffræðilegum þáttum. Þarfnast mikillar áframhaldandi þróunarvinnu.

Singularly good and credible presentation. The proposal refers to nature. The support structure is light and visible. The idea of utilizing the support structure as a support web for vegetation is interesting, but difficult to implement.
Technical opinion A difficult proposal with respect to load bearing capacity and electrical factors. Needs a great deal of further development.

Tillaga 68 merkt 12876

Serafina Amoroso
Ítalía

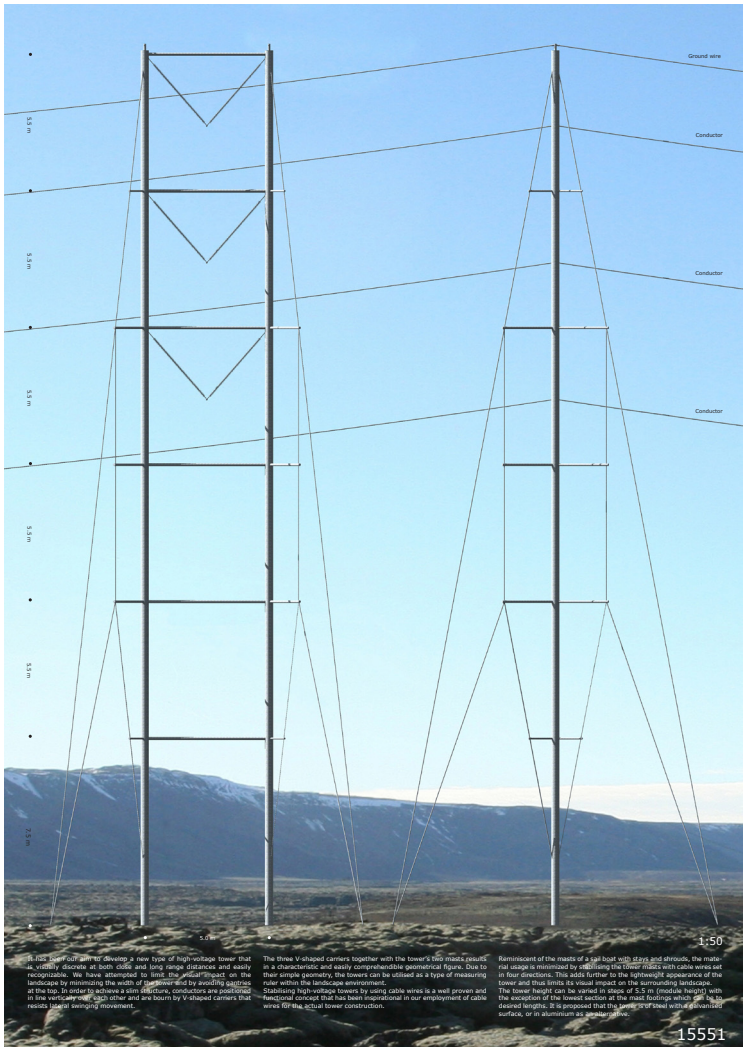


Fjórar nokkuð ólíkar tillögur sem eiga það sameiginlegt að sækja hlutföll sín í nokkuð stranga geometríu/módúlkerfi. Tillaga C lifir þó sjálfstæðu lífi og er einna áhugaverðust þar sem hún sprettur nánast upp úr landi eins og risavaxin planta.
Tæknileg umsögn: Tæknilega mögulegar lausnir en þarf að þróa áfram með tilliti til fjarlægðar leiðara frá burðarvirkjum og útærslu á stögum.

Four somewhat dissimilar proposals having in common their derivation of proportions from a somewhat strict geometry/module system. Proposal C has an independent life and is one of the most interesting since it almost springs from the earth like a gigantic plant.
Technical opinion: Technically possible solutions that require further development with respect to distances of power lines from support structures and implementation of guy wires.

Tillaga 69 merkt 15551

PLH design
Henning Solfeldt
Flemming Wagner
Samstarfsmenn: Claus Ulrich Fisher, Naz Yamut
Danmörk

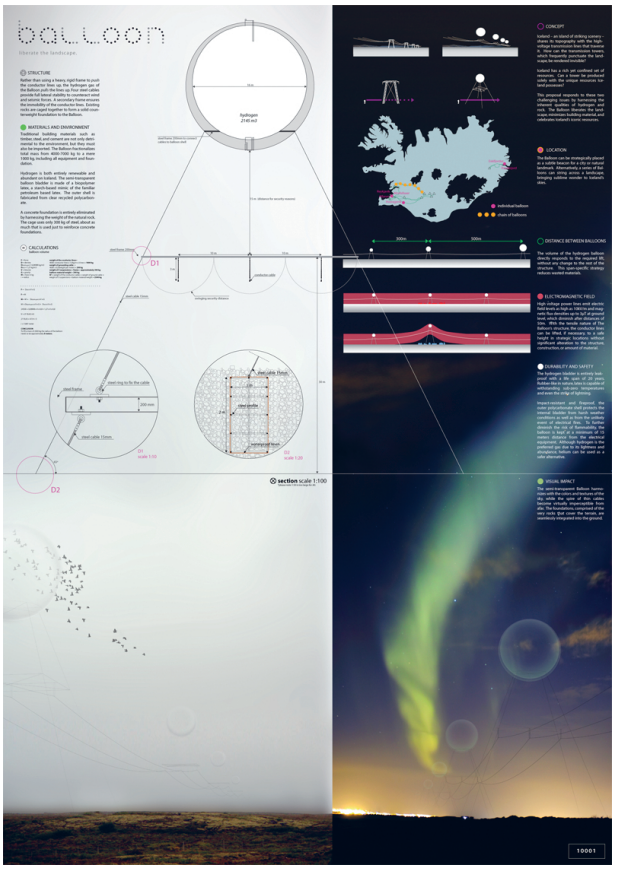


Vel framsett, einföld en mjög há og hefur þannig neikvæð áhrif .
Tæknileg umsögn: Burðarvirki raunhæft og tillaga hagkvæm út frá rafsegulsviði.

Well-presented, simple but very high and thus having a negative impact.
Technical opinion: The support structure is realistic, and the proposal advantageous regarding the electromagnetic field.

Tillaga 70 merkt 10001
Athyglisverð tillaga

João Vieira Costa
Leon Rost
Noregur

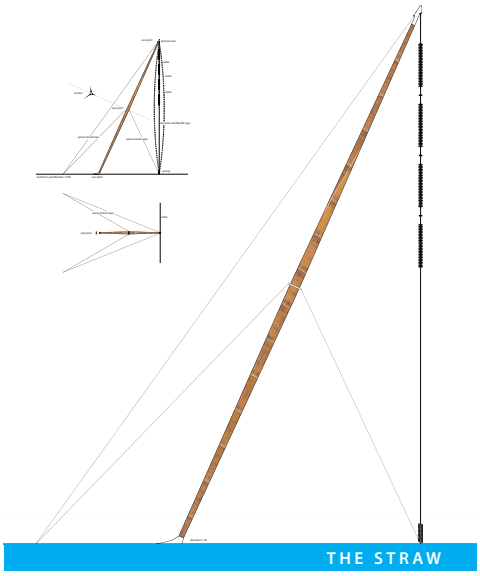


Tillagan er mjög vel framsett, er sérstök og sker sig úr sem óvenju djörf tilraun til að innleiða og endurhugsa flutning línuleiða. Hún fléttar saman skemmtilegar hugmyndir um upphafningu rafmagnslína sem haldið er uppi af loftbelgjum. Verðugt innlegg í framtíðarumræðu um háspennulínumöstur.

The proposal is very well presented, is unique and stands out as an unusual, bold attempt to introduce and rethink the transport of line routes. It intertwines interesting ideas on the elevation of electric lines held up by balloons. A worthy contribution to future discussion about high-voltage line towers.

Tillaga 71 merkt 88888

BYSTRUP ARCHTECTS AND DESIGNERS
Burðarþol: Ramboll A/S, Ulrick Støttrup Andersen
Vindur: Svend Ole Hanse
Efnisval: Richard Aagaard
Danmörk



THE STRAW

Like straws in the wind, this pole leans slightly to the side on its way across the landscape.

A simple construction with one sloping pole, two wires to keep the pole from falling and one wire to keep the conductors in place.

The simple construction makes the pole flexible and able to cope with influences from the surroundings, such as wind and snow.

The beautiful warm color of the weathering-steel suits the many different landscapes of raw nature that the power line will encounter.

An element in the landscape, that is easy to place anywhere, because of its construction, and the way in which the materials interact with the surroundings.

Construction

The Straw consists of two triangles, that are joined in the middle with a cast joint in weathering steel.
The base and the top of the Straw are also made of sand-cast weathering steel, leaving the impression of one integrated construction.

To keep the straw from tilting over, two spiral-strand ropes are stretched between the top of the pole and the ground.
A third spiral-strand rope is stretched from the top of the pole and vertically down to the ground, and keeps the conductors and cables in place.

The vertical dynamic and flexible guy consists of 4 insulator chains between the top of the tower and the remaining guy to the ground, ensuring the insulation between conductors and ground. The horizontal reactions from the conductors will introduce additional tension forces in the vertical "guy", and introduce horizontal deflections of the conductor "supports". The whole system of straw and guys is absorbing the reactions from the conductors ensuring that the distance between straw and conductors is fulfilling the electrical requirements as well as minimizing the dynamic effects.

This vertical separation between the conductor-lines is an optimal solution, considering the horizontal forces and deflections due to the extreme wind conditions in Iceland.

The vertical vibrations due to galloping that occurs on ice-covered conductor-lines are in this proposal effectively removed by the separators constructed as TMD dampers. Introducing a spring at the connection to the foundation of the "conductor" guy can control the behaviour even further.

Material

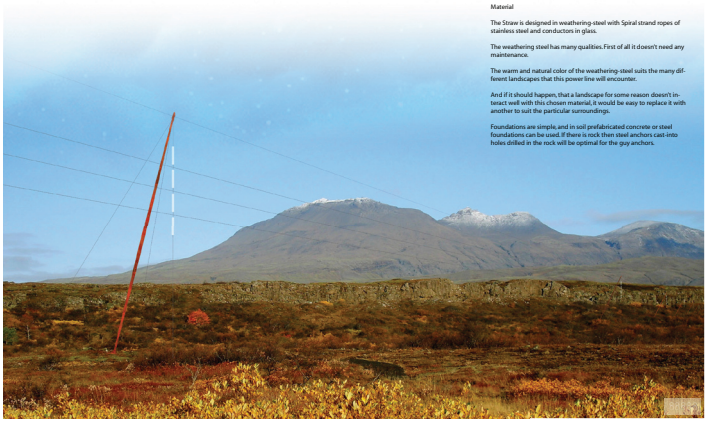
The Straw is designed in weathering steel with Spiral strand ropes of stainless steel and conductors in glass.

The weathering steel has many qualities. First of all it doesn't need any maintenance.

The warm and natural color of the weathering-steel suits the many different landscapes that this power line will encounter.

And if it should happen, that a landscape for some reason doesn't interact well with this chosen material, it would be easy to replace it with another to suit the particular surroundings.

Foundations are simple, and in soil prefabricated concrete or steel foundations can be used. If there is rock then steel anchors cast-into holes drilled in the rock will be optimal for the guy anchors.

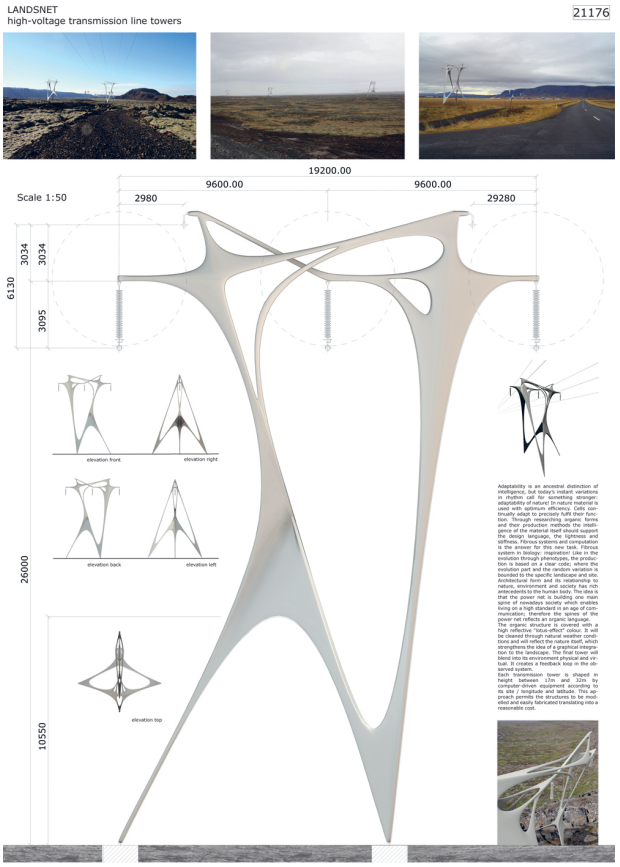


Sáraeinföld og stílhrein tillaga. Umhverfisáhrif í algjöru lágmarki. Væru tæknilegar forsendur fyrir hendi þá er hér um mjög áhugaverða tillögu að ræða.
Tæknileg umsögn: Burðarvirkið og raffræðileg hönnun geta gengið en gæta þarf að mörgum atriðum ef tryggja á rekstraröryggi og persónuöryggi. Burðarvirkið getur verið óstöðugt. Mastrið tekur yfir mjög breitt svæði.

A very simple and cleanly styled proposal. The environmental impact is at an absolute minimum. If the technical premises existed, this would be a very interesting proposal.
Technical opinion: The support structure and electrical design can work, but care must be taken regarding many points if operational and personal security is to be ensured. The support structure can be unstable. The tower extends over a very wide area.

Tillaga 72 merkt 21176
Athyglisverð tillaga

ARPHENOTYPE/HORhizon
Arkitekt Dietmar Koering, Dipl. Ing. (FH) Master of Arch.
Þýskaland

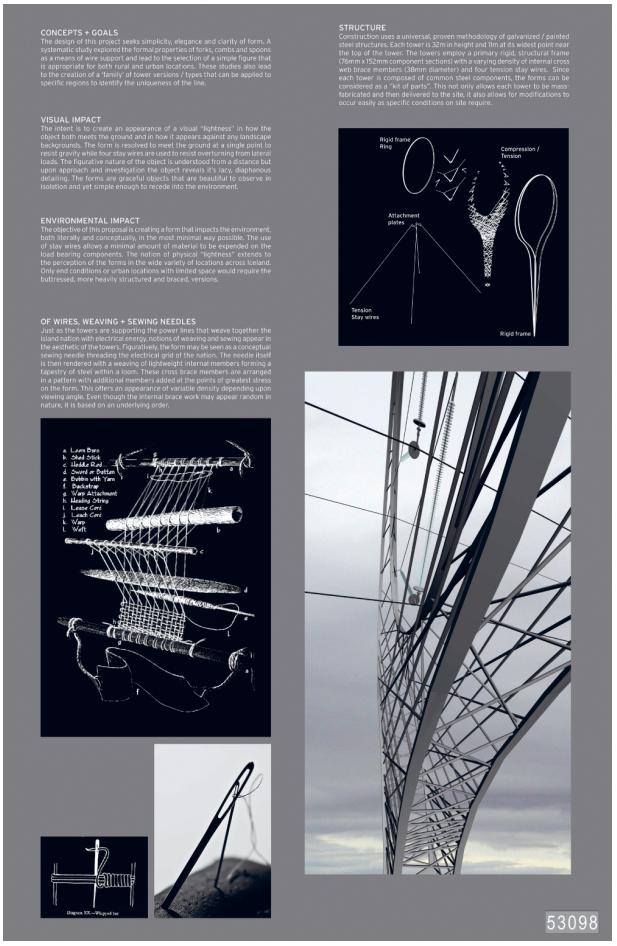


Tillagan er mjög vel framsett. Listræn formsköpun í gerð burðarvirkis sem gæti opnað leiðir að ótal útfærslum í nýrri gerð mastra.
Tæknileg umsögn: Efnið sem gert er ráð fyrir að mastrið sé byggt úr hefur ekki verið notað í þessum mæli áður.

Very well presented proposal. Artistic creation of form in the type of support structure that could open ways for innumerable implementations of a new type of tower.
Technical opinion: The material out of which the tower is to be built has not been used in this quantity before.

Tillaga 73 merkt 53098

blank studio, inc.
Matthew G. TrzEbiatowski, AIA
think free
Michael Powell
Bandaríkin

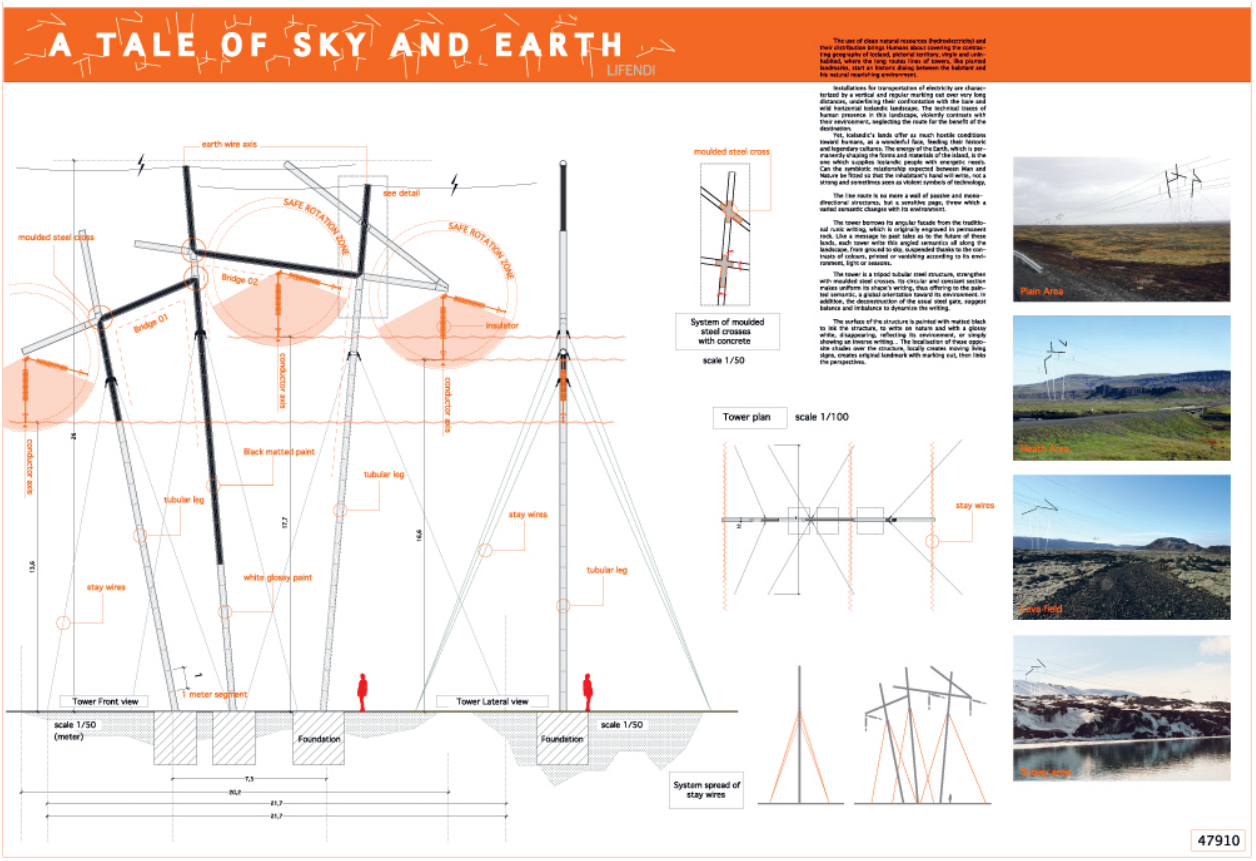


Vel framsett og listræn grunnhugmynd. Tilvísun til margbreytilegra forma á ólíkum stöðum. Sækir hugmyndir í nytjahluti daglegs lífs sem ekki tengjast hefðbundnum orkuflutningi, og þó? Að flytja mat frá diski að munni er orkuflutningur. Tillagan varpar því nýju ljósi á tilgang Landnetsins.
Tæknileg umsögn: Burðarvirkið er mögulegt en þarf að þróa áfram. Endurskoða þarf raffræðilega hönnun með tilliti til fjarlægða yfir í burðarvirki.

A well-presented and artistic basic idea. References to diverse forms in different places. Basic ideas on practical objects of daily life not connected with traditional energy transport although…? Transferring food from dish to the mouth is energy transport. The proposal sheds new light on the purpose of Landsnet.
Technical opinion: The support structure is possible but requires further development. Electrical design regarding distances to the support structure must be examined.

Tillaga 74 merkt 47910

Guillaume Letschert
Meðhönnuðir: Myriam Cesaroni, Dorian Bernard
Frakkland

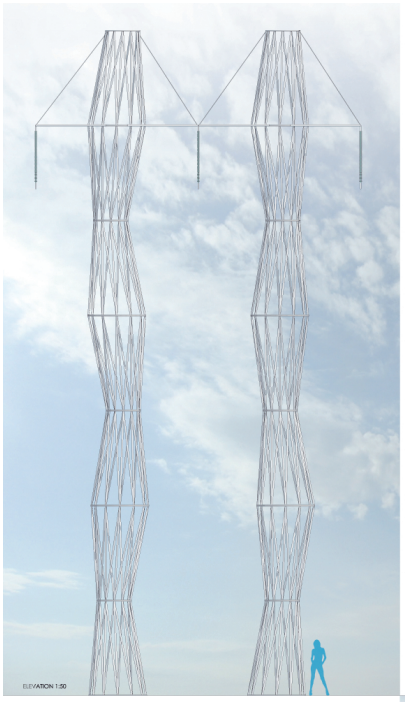


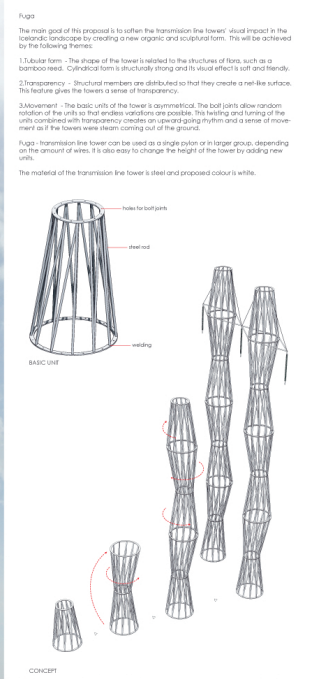
Tillagan virðist í fyrstu nokkuð flókin en við nánari skoðun kemur í ljós einföld og raunhæf grunnhugmynd sem bæði virðist hagkvæm og tæknilega vel útfærð. Línugerðin ein og sér gefur mikla möguleika á fjölbreytni. Hin leyndardómsfulla tilvísun í rúnaletur opnar óravíddir af túlkunarmöguleikum á ólíku landslagi og staðháttum.
Tæknileg umsögn: Endurskoða þarf raffræðilega hönnun með tilliti til fjarlægða yfir í burðarvirki.

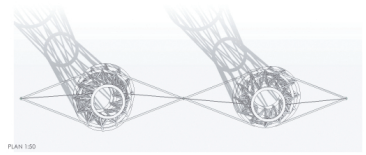
The proposal at first seems somewhat complex, but upon closer consideration a simple and realistic basic idea comes to light that seems both advantageous and technically well implemented. The type of line per se gives great potential for diversity. The mysterious reference to runes opens expansive possibilities for the interpretation of different landscapes and local conditions.
Technical opinion: The electrical design regarding distances to the support structure must be examined.

Tillaga 75 merkt 10985

Tuomas Niemelä
Finnland







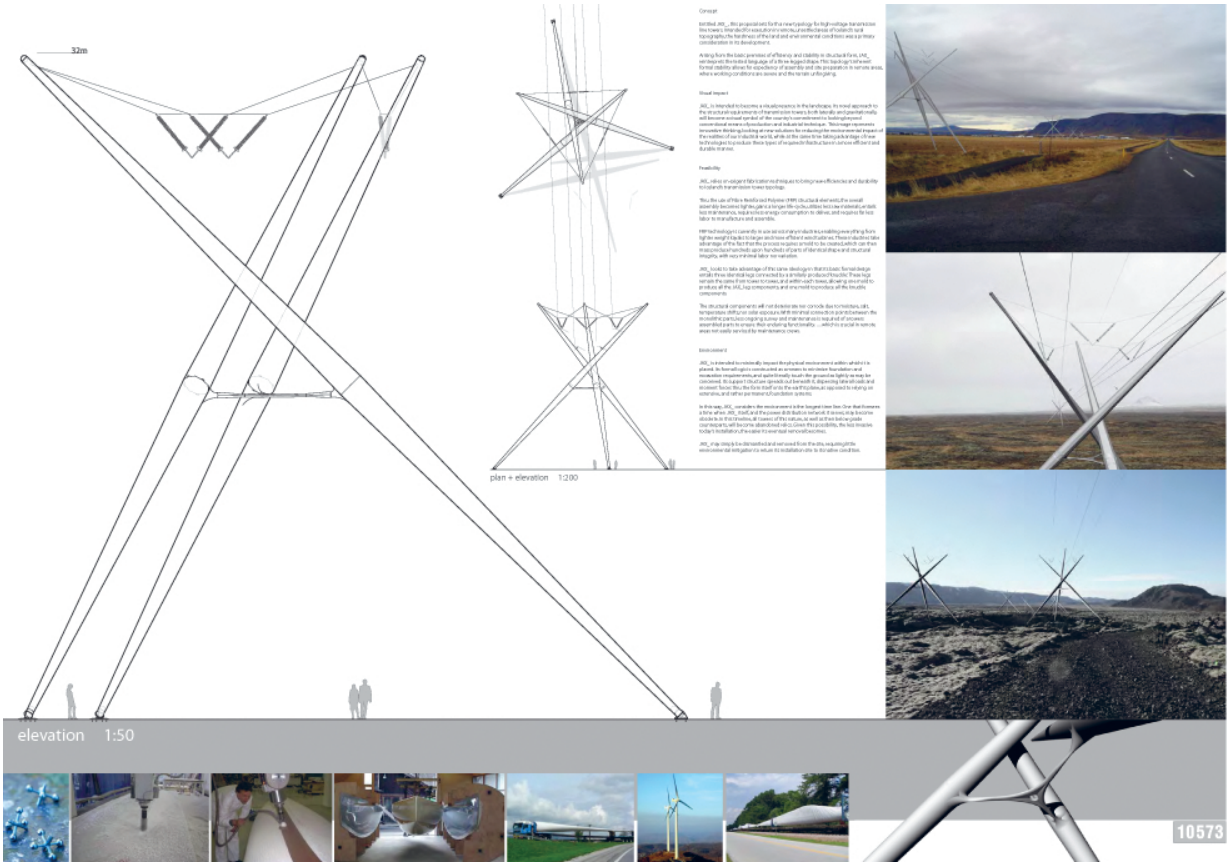
FUGA

Nýstárlegt burðarvirki án sannfærandi tengingar við línubjálka.
Tæknileg umsögn: Burðarvirki þarf að breyta til að ná nauðsynlegum styrk gagnvart þeirri áraun sem búast má við.

An innovative support structure without convincing links to line beams.
Technical opinion: The support structure must be changed to obtain necessary strength against the stress that can be expected.

Tillaga 76 merkt 10573

think free
Michael Powell
blank studio, inc.
Matthew G. Trzebiatowski, AIA
Bandaríkin

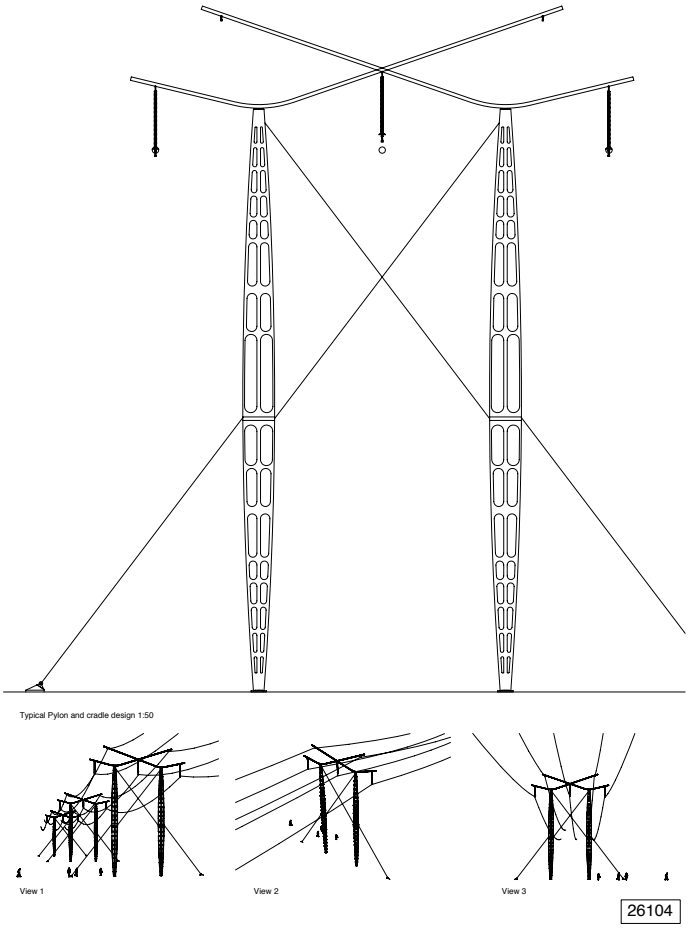


Tillagan leiðir hugann að fisktrönum. Fyrir vikið eru umhverfisáhrifin minni í huga margra Íslendinga. Samfléttaður leikur nettra burðarspjóta er nokkuð þungur en áhrifamikill.
Tæknileg umsögn: Burðarvirki þarf að þróa mikið áður en þetta telst raunhæf lausn. Einnig þarf að þróa betur hvernig leiðarar eru hengdir upp með tilliti til fjarlægða í burðarvirki.

The proposal brings to mind fish drying racks. For that reason the environmental impact is less in the minds of many Icelanders. The interplay of light support lances is somewhat heavy but moving.
Technical opinion: The support structure requires a great deal of development, but this is deemed a realistic solution. Better development is also needed of how power lines are hung with regard to distances in the support structure.

Tillaga 77 merkt 26104

NJBA Architectur + Urban Design
Noel J Brady
Írland

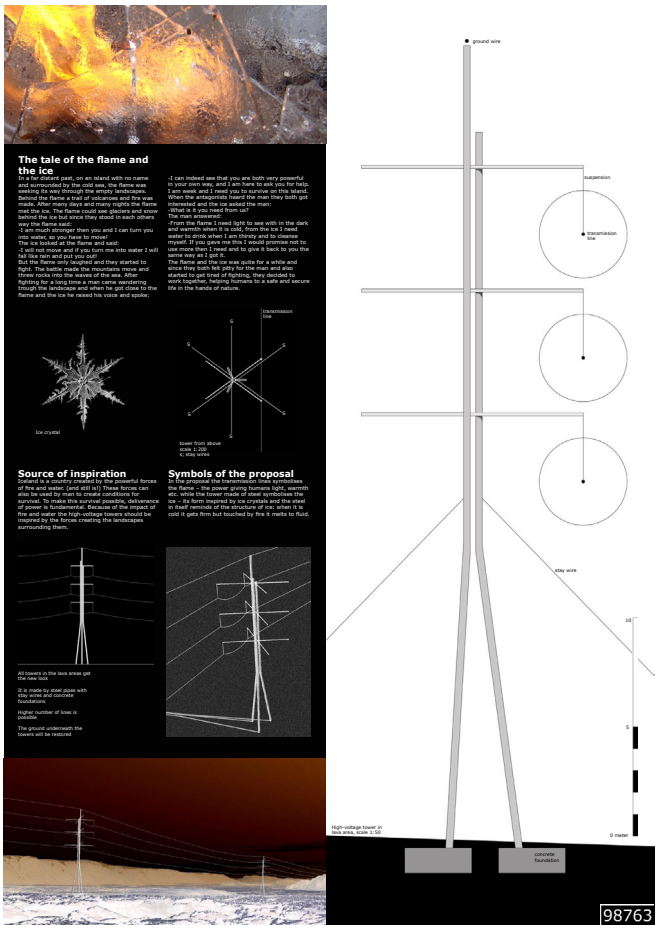


Einföld og vel leyst tillaga. Virðist nokkuð hefðbundin í grunnuppbyggingu en ákveðin nýbreytni í útfærslu á slám. Engin bylting en góð viðbót við þekktar mastragerðir.
Tæknileg umsögn: Burðarkerfi í lagi en þverslá þarf þó að vera efnismeiri.

A simple and well-solved proposal. Its basic structure seems somewhat traditional, but there is a certain innovation in the implementation of crossbars. No revolution but a good addition to a known type of power.
Technical opinion: The support system is satisfactory, but the crossbar needs to be sturdier.

Tillaga 78 merkt 98763

Fredrik Olausson
Svíþjóð

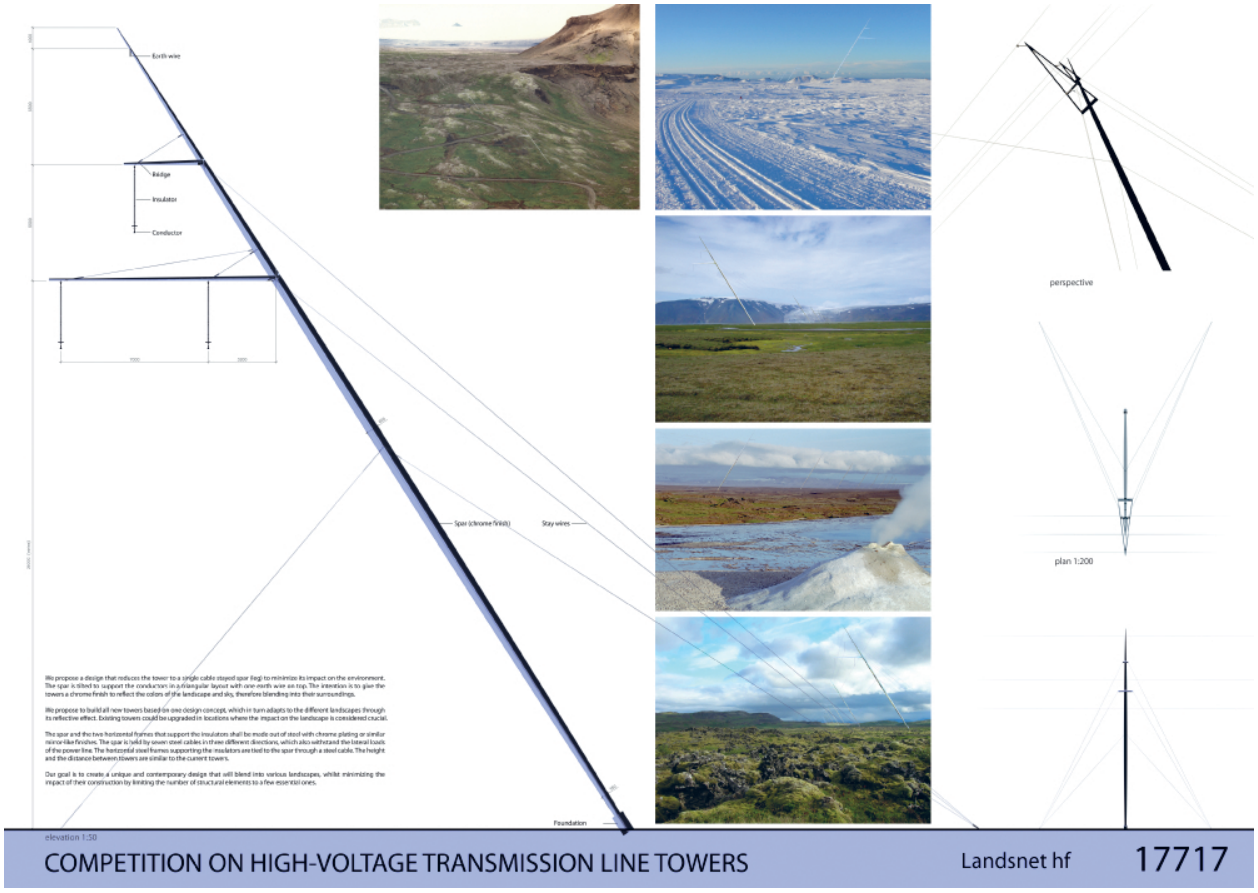


Stílhrein, einföld og vel framsett. Fellur vel að landi.
Tæknileg umsögn: Tæknilega möguleg lausn en þarf að bæta burðarkerfi arma sem halda uppi einangrakeðjum. Fyrirkomulag leiðara og upphengi hagkvæm út frá rafsegulsviði.

Cleanly styled, simple and well presented. Blends well with the land
Technical opinion: A technically possible solution, but arms must be added to the support system to hold up insulation suspensions. The arrangement of power lines and their suspension is advantageous regarding the electromagnetic field.

Tillaga 79 merkt 17717
Athyglisverð tillaga

M. Sagasta Garcia
Holland

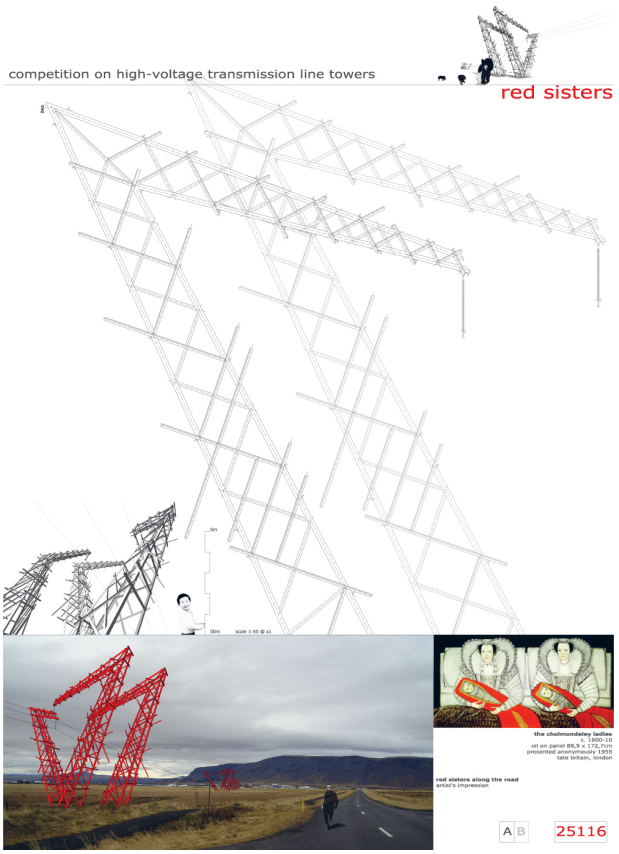


Kraftmikil en tignarleg tillaga. Leiðir hugann að möstrum seglskipa með þanin segl í vindi. Einnig fær sjáandinn tilfinningu fyrir hreyfingu. Á einfaldan hátt vakna mörg hughrif en að sama skapi er tillagan í mikilli sátt við umhverfið. Möstrin eru all há og stögunin umfangsmikil.
Tæknileg umsögn: Burðarvirkið og rafræðileg hönnun geta gengið en gæta þarf að mörgum atriðum ef tryggja á rekstraröryggi. Mastrið tekur yfir mjög breitt svæði.

A powerful and dignified proposal. Brings to mind the masts of a sailing ship with sails billowing in the wind. The viewer also gets a feeling of motion. Inspiring thoughts waken simply, but in the same way, the proposal is very reconciled with the environment. The towers are all high, and the guy wiring extensive.
Technical opinion: The support structure and electrical design can work, but care must be taken regarding many points if operational and personal security is to be ensured. The tower extends over a very wide area.

Tillaga 80 merkt 25116

Julian Ramirez Rentero, arkitekt
England

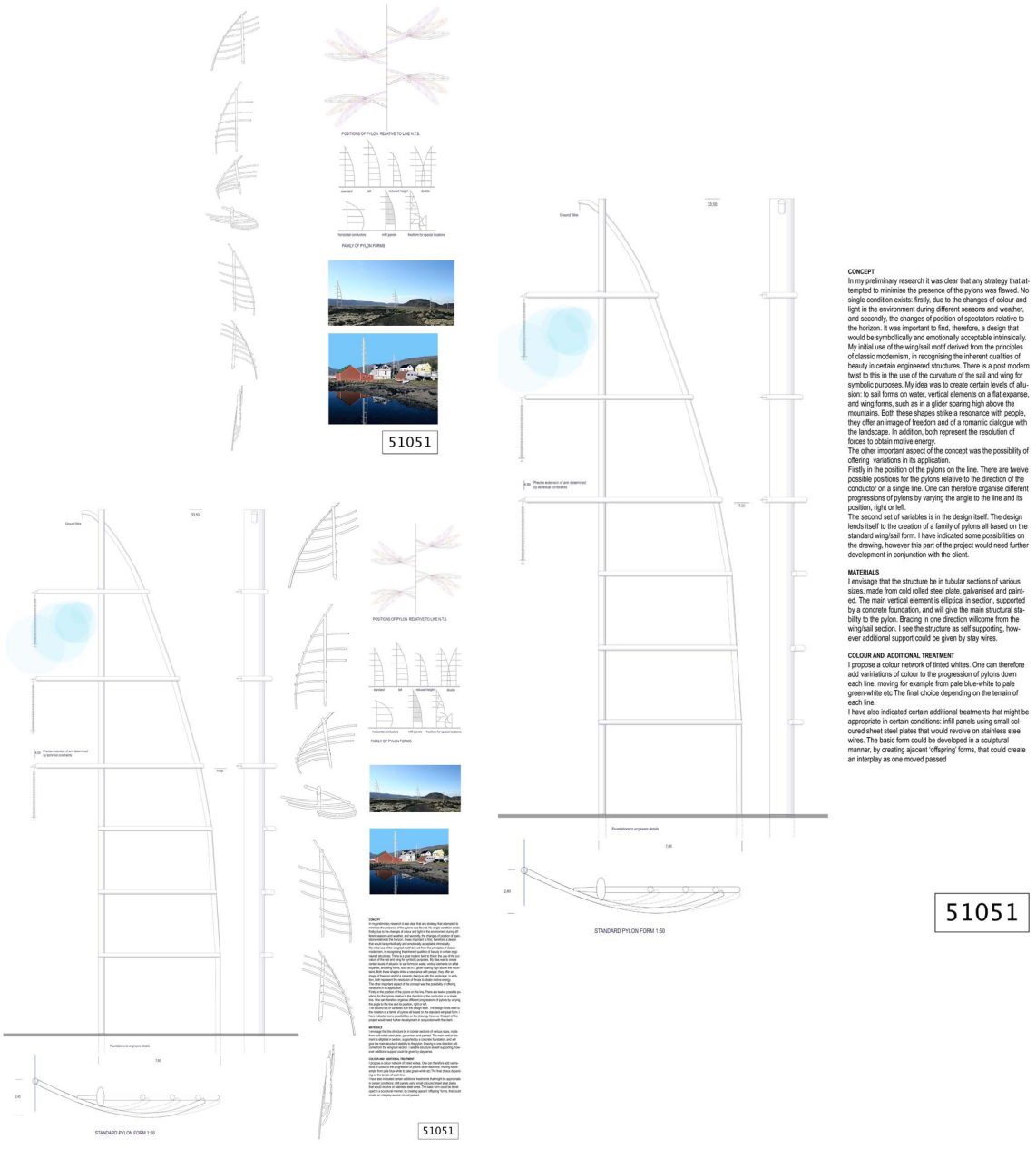


Einstaklega kraftmikil tillaga sem leiðir hugann að iðnbyltingu sovéttímans. Einstaklingurinn verður að fjölda sem yfirgnæfir hið fínlega og viðkvæma. Sigurinn er alger.
Tæknileg flétta með sterklegu inngripi í landslag. Skemmtilegt uppbrot á viðurkenndu burðarvirki turna með einingum sem falla að mannlegum stærðum. Byggt upp eins og barn hafi farið léttum höndum um einangrara og raðað þeim upp í leikgleði.
Tæknileg umsögn: Efnismikil lausn.

Singularly powerful proposal, bringing to mind the industrial revolution of the Soviet period. The individual becomes the masses, towering over the delicate and the sensitive. The victory is absolute. A technical interweaving with strong intervention in the landscape. A delightful layout of a recognized support structure of towers with units fitting the human size. Structured as if a child had run light hands over the insulators, arranging them at play.
Technical opinion: A very substantial solution.

Tillaga 81 merkt 51051

IAN JACKSON BAhons architecture
Frakkland

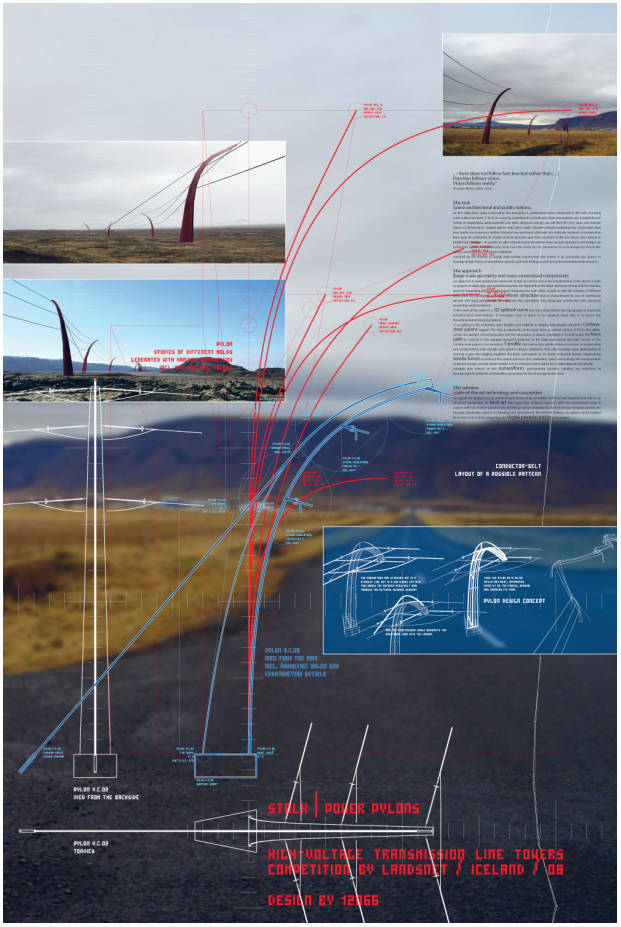


Skemmtileg skírskotun í seglbúnað en skortir fínleika í útfærslu. Gæti tengst umhverfi sem eintstök upplifun.
Tæknileg umsögn: Þarf að þróa áfram með tilliti til upphengis á leiðurum og einangrunar.

An engaging reference to sail equipment but lacking a refined implementation. Could be connected with the environment as a unique experience.
Technical opinion: Must be further developed with respect to the suspension of power lines and insulation.

Tillaga 82 merkt 12066
Athyglisverð tillaga

DI Richard Dank
DI Andreas Gruber
Austurríki

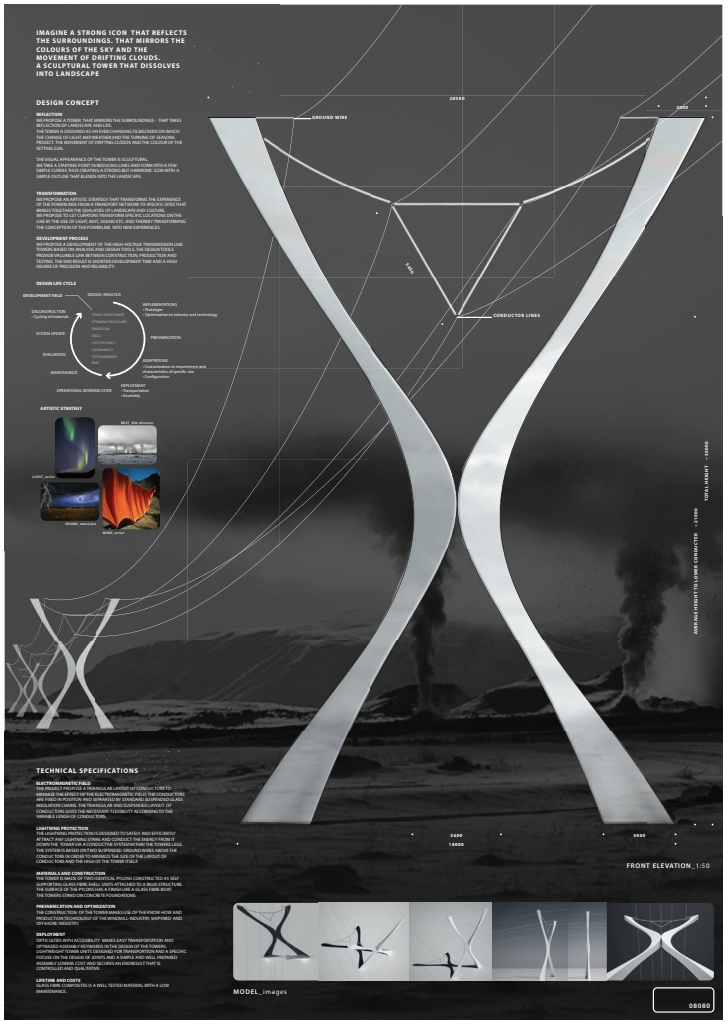


Þessi möstur virðast spretta upp úr jörðinni. Burðarvirki er sáraeinfalt en efnisnotkun töluverð. Kortenstálið er fullkomlega eðlilegt efnisval og leiðir hugann að eldvirkni og heitum uppsprettum. Nýbreytni með leik burðarvirkja í landslagi.
Tæknileg umsögn: Þarf að þróa áfram með tilliti til upphengis á leiðurum og einangrunar.

These towers seem to sprout out of the earth. The support structure is extremely simple and the use of materials considerable. Corten steel is a perfectly normal choice of material and brings to mind volcanic activity and hot springs. Innovation with the play of support structures in the landscape.
Technical opinion: Must be further developed with respect to the suspension of power lines and insulation.

Tillaga 83 merkt 08080

SEA I/S ARCHITECTS MAA
Karsten Gori
Uffe Leth Laursen
Danmörk

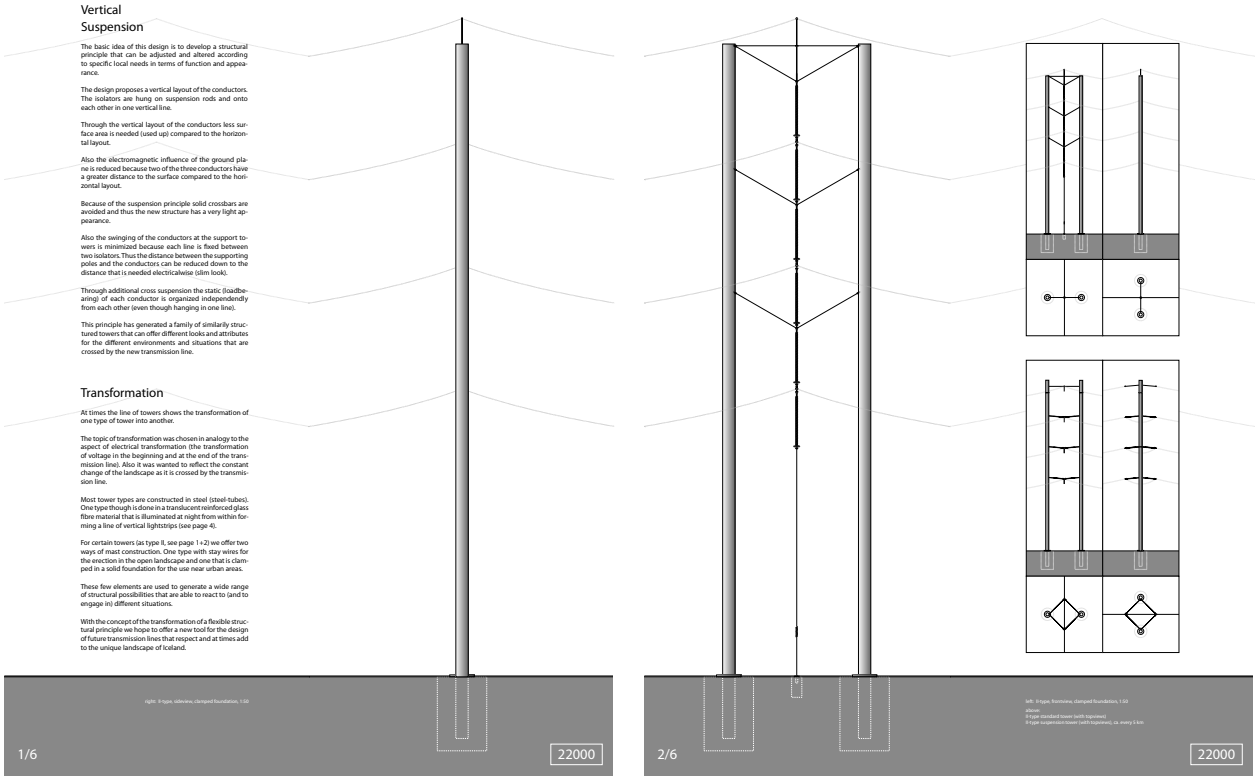


Mjúk boglínulöguð form sem falla vel að landi og virka sem speglar. Kallar á að vandað verði til staðsetningar.
Tæknileg umsögn: Efnið sem gert er ráð fyrir að mastrið sé byggt úr hefur ekki verið notað í þessum mæli áður.

Soft curved forms blending well into the land and working like mirrors. Calls for careful placement.
Technical opinion: The material out of which the tower is to be built has not been used in this quantity before.

Tillaga 84 merkt 22000

Henning Götz
Hans-Gerd Rudat
Þýskaland

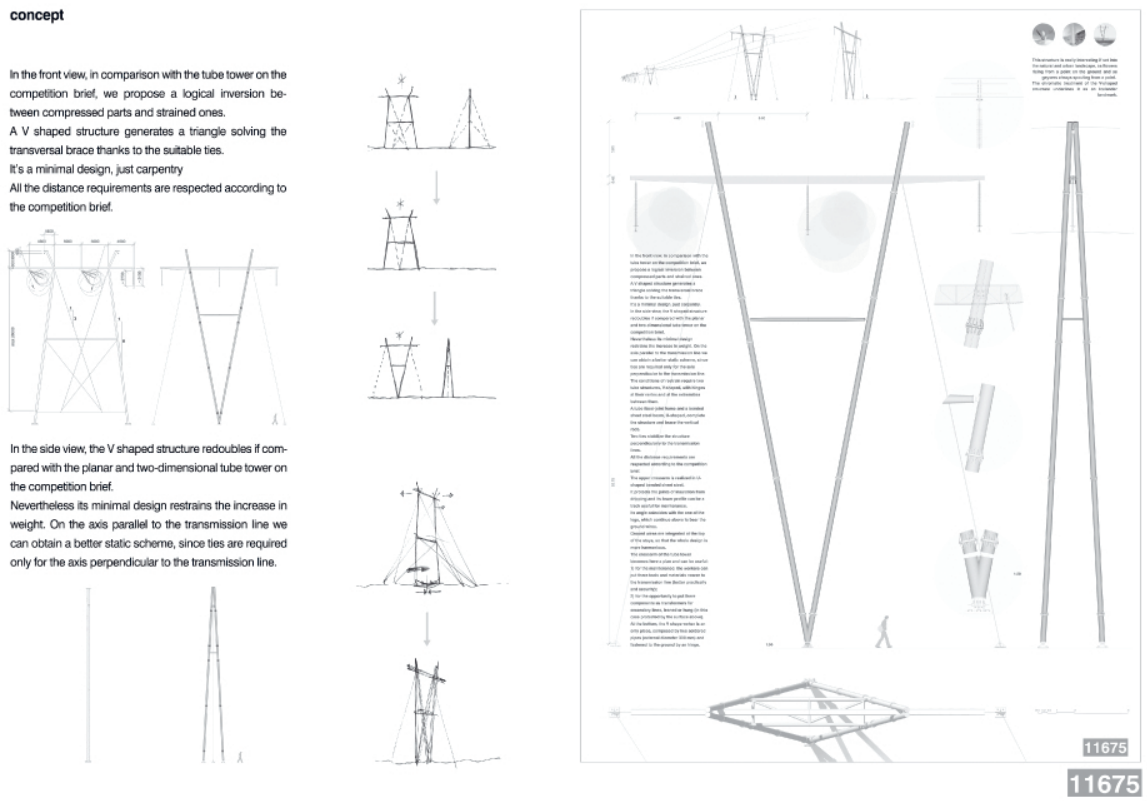


Mjög góð framsetning og innileg tilraun til þess að túlka mismunandi línugerðir, með einföldu og nettu yfirbragði í sátt við margbreytilegt umhverfi.
Tæknileg umsögn: Burðarvirkið og raffræðileg hönnun geta gengið en gæta þarf að nokkrum atriðum ef tryggja á rekstraröryggi og persónuöryggi.
Fyrirkomulag leiðara hagstætt út frá rafsegulsviði.

A very good presentation and sincere attempt to interpret different line types, with simple and light appearance in harmony with diverse environments.
Technical opinion: The support structure and electrical design can work, but care must be taken regarding several points if operational and personal security is to be ensured. The arrangement power lines is advantageous regarding the electromagnetic field.

Tillaga 85 merkt 11675

Enrico Bona
Samstarfsaðilar: Guiditta Dirotti, Roberto Martignone, Elisa Nobile, Paolo Costa
Ítalía

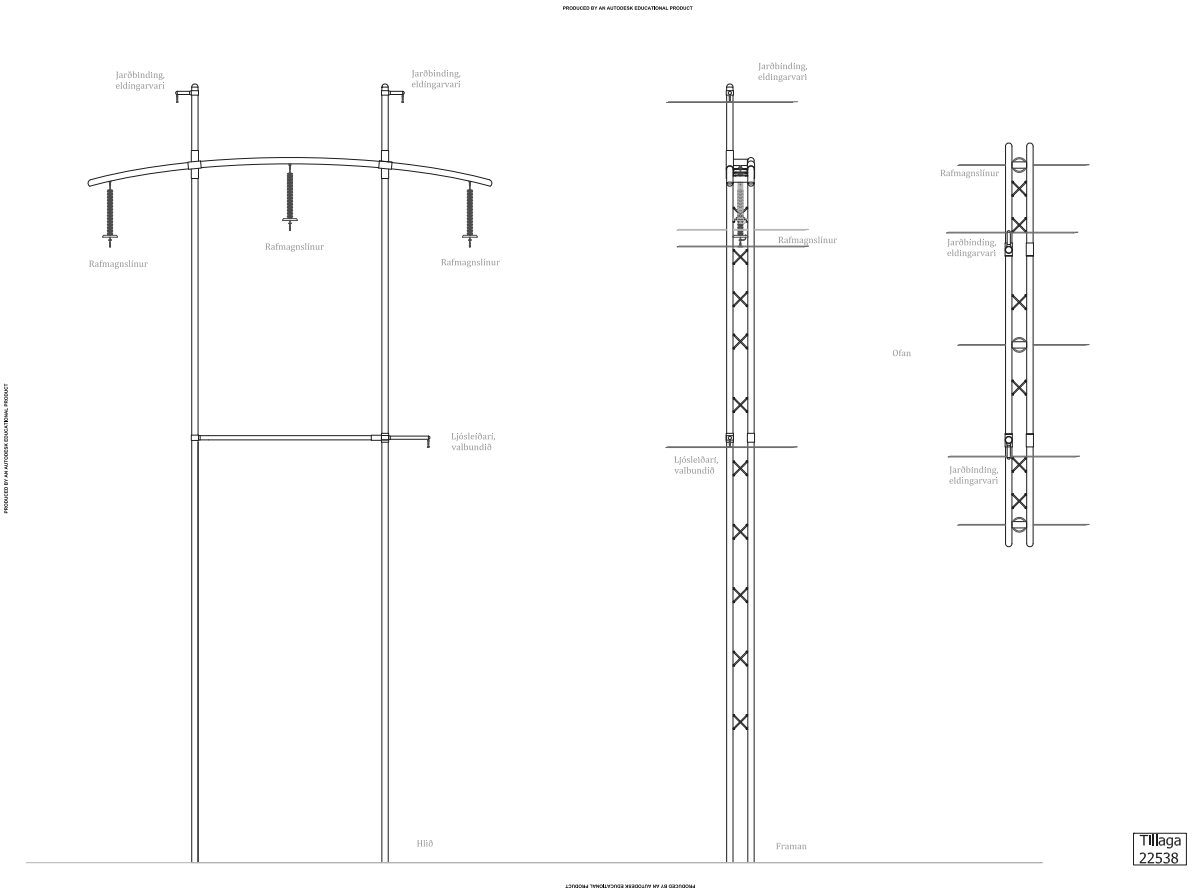


Vel fram sett og vel unnin. Látlaus en hefðbundin.
Tæknileg umsögn: Hefðbundið burðarvirki.

Well-presented and well-done. Unpretentious but traditional.
Technical opinion: Traditional support structure.

Tillaga 86 merkt 22538

Svanur Baldursson
Ísland

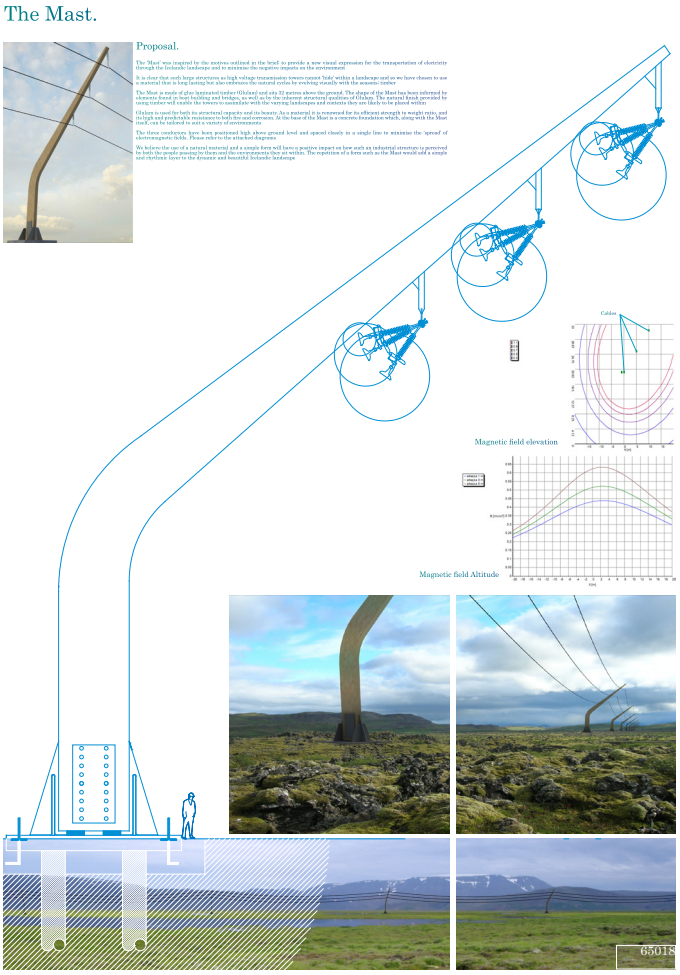


Tæknileg framsetning skýr en tillagan átakalítil.
Tæknileg umsögn: Hefðbundið burðarvirki.

The technical presentation is clear and the proposal noncontroversial.
Technical opinion: Traditional support structure.

Tillaga 87 merkt 65018

voonwong&bensonsaw
Voon Wong, Gautier Pelegrin, Olivia Moore
England

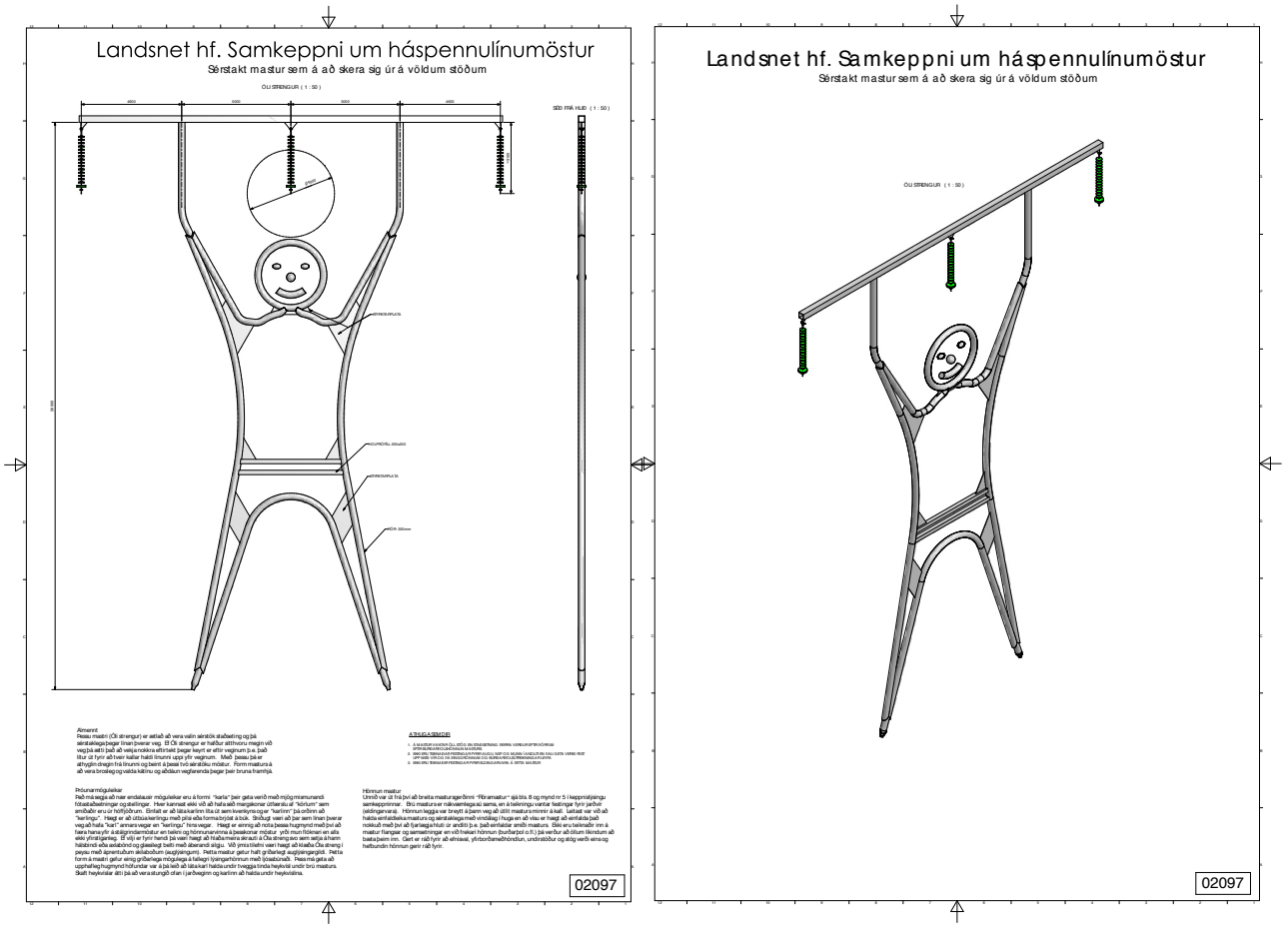


Frumleg hugmynd en þunglamaleg í uppbyggingu. Nýstárleg notkun á hefðbundinni byggingaraðferð sem ef til vill má nýta í ákveðnu samhengi.
Tæknileg umsögn: Þarf að þróa áfram með tilliti til upphengis á leiðurum og einangrunar.

An original idea but ponderous in structure. Innovative use of a traditional building method that perhaps may be utilized in a certain context.
Technical opinion: Must be further developed with respect to the suspension of power lines and insulation.

Tillaga 88 merkt 02097

Gunnar Óli Sigurðsson
Ísland

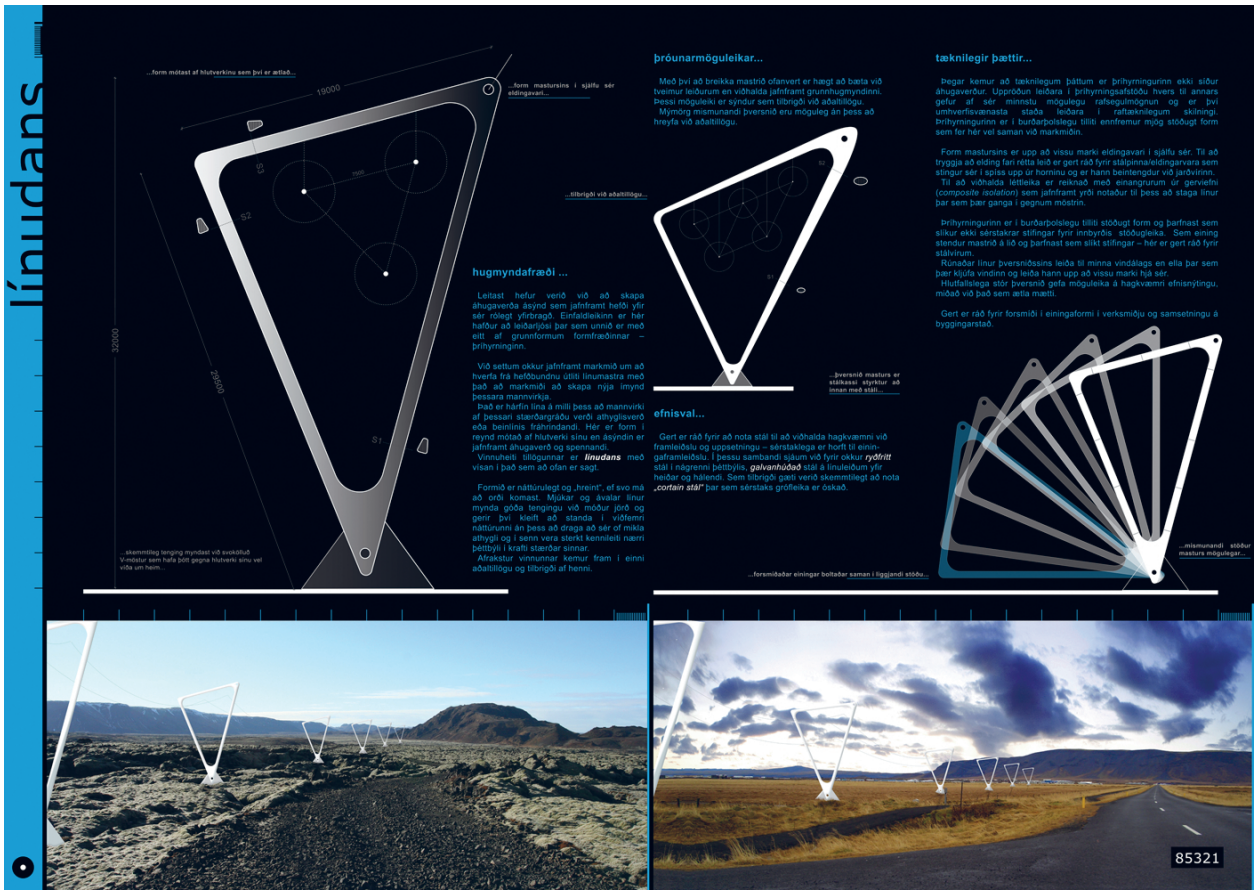


Af hverju ekki?
Tæknileg umsögn: Tæknileg útfærsla stutt komin.

Why not?
Technical opinion: Technical implementation not very far along.

Tillaga 89 merkt 85321

THG arkitektar
Magnús Rannver Rafnsson
Paolo Gianfrancesco
Ráðgjafar: Verkfræðistofa Jóhanns Indriðasonar, Eymundur Sigurðsson og Frank Frankson
Ísland



Einstaklega stílhrein og nýstárleg tillaga. Hið mjög svo ákveðna þríhyrningslaga form virðist þó vera í baráttu við fleiri krafta en þá sem hefðbundin línumannvirki þurfa að þola í tæknilegri útfærslu. Þetta gefur ákveðinn innri veruleika eða hughrif sem leiða til umhugsunar.
Tæknileg umsögn: Skoða þarf raffræðilega hönnun með tilliti til fjarlægða frá leiðurum í burðarvirki og hvernig þeir eru hengdir upp. Burðarvirki þarf að þróa.

Singularly clean and innovative proposal. The very decided triangular form nevertheless appears to be at odds with more forces than those that traditional line structures have to endure in technical implementation. This gives a certain inner reality or inspiring thought leading to contemplation.
Technical opinion: Electrical design regarding distances from power lines in the support structure must be examined as well as how they are suspended. The support structure requires development.

Tillaga 90 merkt 80328

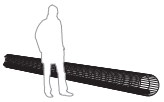
Studio Irander
Johanna Irander, Lanscape Architect LAR/MSA
Holland

transmission line network

The pylons of the power distribution lines in the high voltage network creates an interference in the open character of the Icelandic landscape.

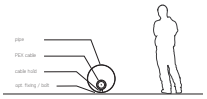
pipe materialisation

The cable pipe can be constructed in a selection of durable and non corrosive materials in relation to aesthetic and cost factors. If constructed by steel the reflective surface will appear visible from a distance, forming a subtle line in the landscape.



high voltage cable pipe

A PEX cable system can be used for systems up to 500 kV and is distributed in sections with maintenance free cable joints. It has a protective layer of plastic material to protect the cable from corrosion. The cable is set in a protective segmented pipe construction which is limiting the accessibility to the cable. Openings in the pipe ensures air flow around the cable for a stabilization of the temperature by the radiated energy from the cable.



An overhead high voltage transmission line has a strong impact on the landscape, where its vertical pylons are dominating the view. The Icelandic landscape is renowned for its open beauty, and industrial vertical elements are visually intrusive in this open landscape.

As an alternative to vertical pylons with hanging uninsolated lines the proposal shows an insolated high voltage transmission cable, commonly used for underground purposes, which is laid on top of the ground. It requires less construction work and can be used in unsettled areas on variable ground conditions; on heaths, in water, on lava fields, mainly in situations where the installation of pylons or the placing of the cable underground is costly. Where applicable the cable can be put underground, for example by road crossings or next to settlement areas.

The proposal does therefor not suggest a standardised type of pylon, but the design of a pipe construction which the cable runs through, making it possible to place the cable in difficult terrain and where an overhead transmission line would be interfering with the landscape view. The pipe simply follows the contours of the ground and gives a minimum of intrusion on the view of the landscape.

The initial higher installation cost of a PEX cable will have to be compared to the reliability and the maintenance cost of the transmission system, as it requires less maintenance than uninsolated lines. The strength of an electromagnetic field varies with the fluctuations of levels of the electric current in the cable. Even though the strength of the magnetic field in the insolated cable is higher in relation to traditional overhead power lines, it does not generate an electric field, due to a protective shield layer of copper in the cable.

The design proposes a flexible use of a high voltage cable where its visual impact is adjusted to follow the landscape.

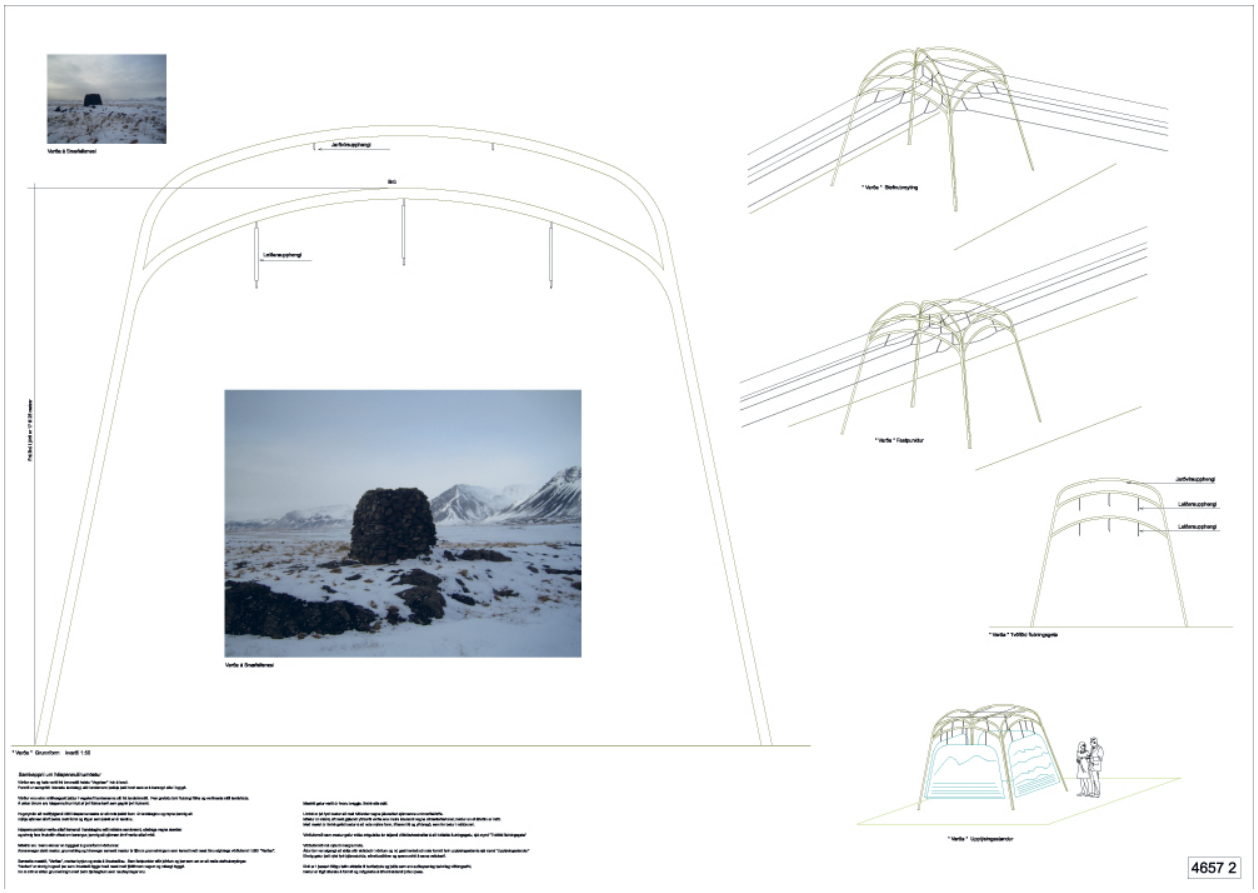
80328

Er ekki innan ramma samkeppninnar.

Does not fall within the frame of the competition.

Tillaga 91 merkt 46572

Teiknistofan Víðihlíð 45
Kjartan Mogensen, landslagsarkitekt
Bjarni Einarsson, Eðalbóndi Tröð, Snæfellsnesi
Aðstoð við textagerð: Ólafur Sigurðsson
Ísland

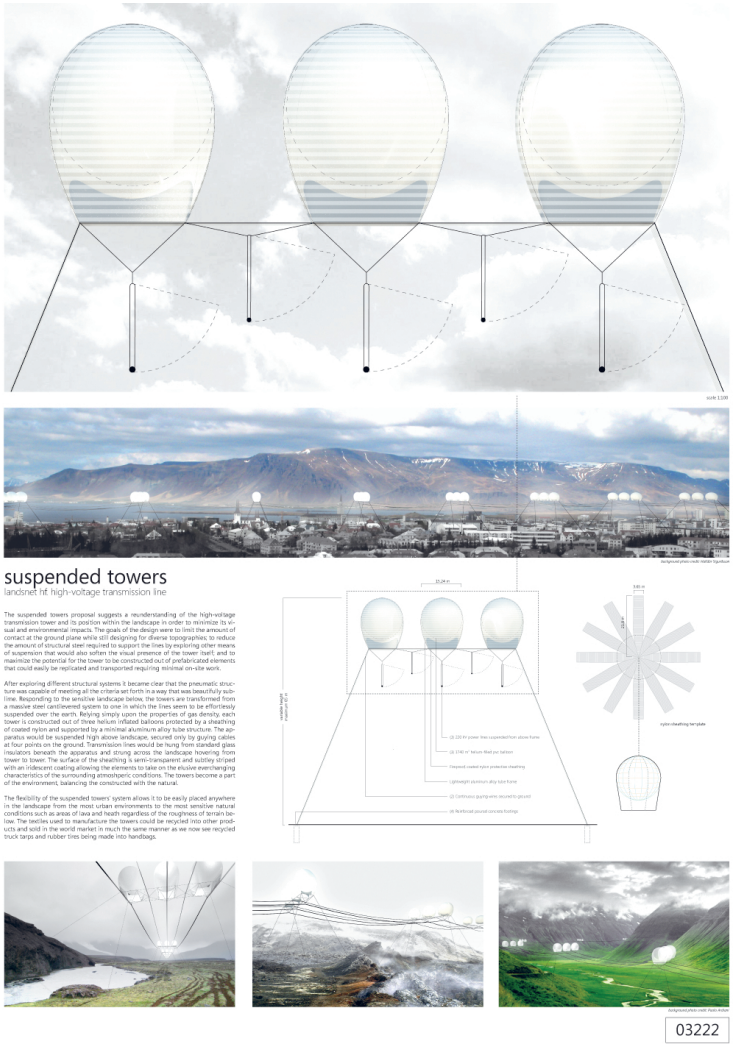


Flókið mannvirki en áhugaverð skírskotun í vörðu. Myndi marka þung spor í umhverfi.
Tæknileg umsögn: Skoða þarf raffræðilega hönnun með tilliti til fjarlægða frá leiðurum í burðarvirki og hvernig þeir eru hengdir upp. Burðarvirki þarf að þróa.

A complex structure but with interesting reference to a cairn. It would leave heavy footprints in the environment.
Technical opinion: Electrical design regarding distances from power lines in the support structure must be examined as well as how they are suspended. The support structure requires development.

Tillaga 92 merkt 03222

Craig Chapple
Alissa Priebe
Bandaríkin



Góð framsetning, frábær hugmynd sem eflaust mætti nota í vissu umhverfi.

Good presentation, terrific idea that may no doubt be used in a certain environment.

Tillaga 93 merkt 01110

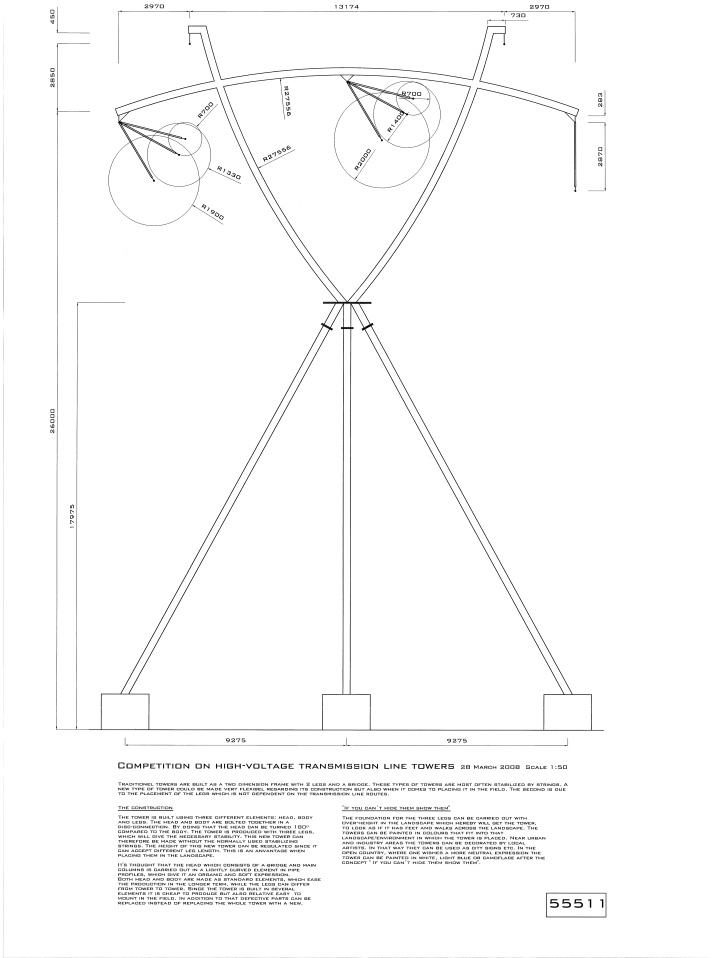
SEA I/S ARCHITECTS MAA
Karsten Gori
Uffe Leth Laursen
Danmörk

Sterk voldug form sem virka sem speglar í margbreytilegu landslagi.
Tæknileg umsögn: Efnisgerð burðarvirkis hefur ekki verið notuð í þessum mæli áður.

Strong, powerful forms working like mirrors in a diverse landscape.
Technical opinion: The type of material for the support structure has not been used in this measure before.

Tillaga 94 merkt 55511

Nikolaj Thymark
Danmörk

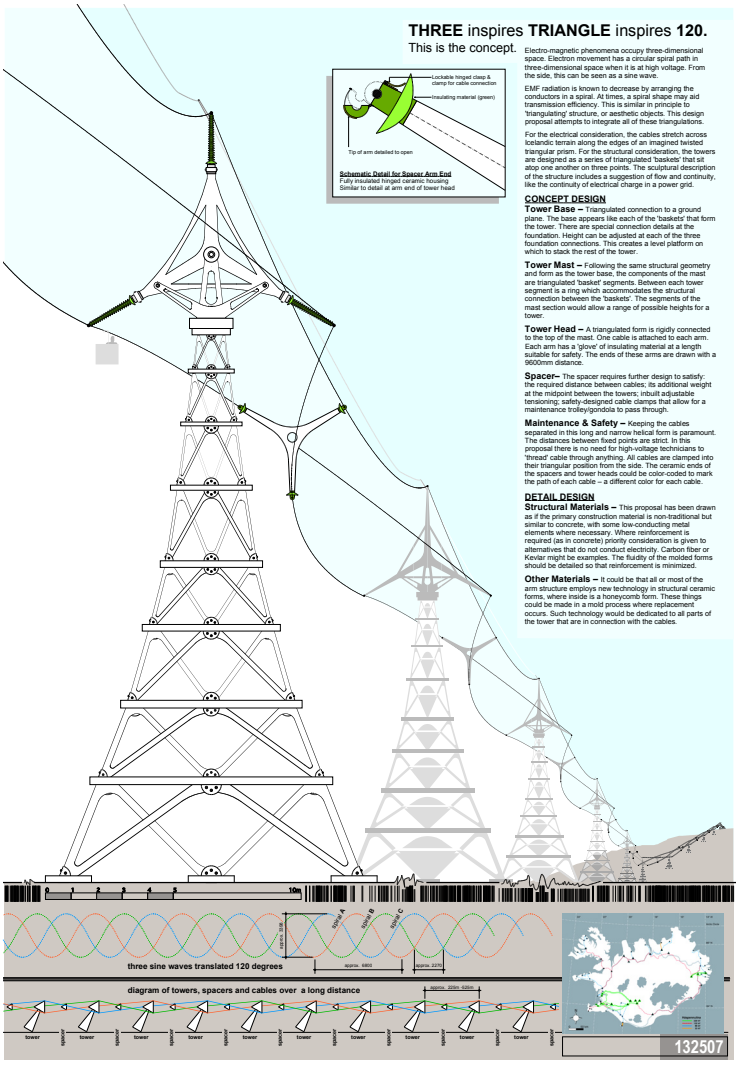


Einföld framsetning, takmörkuð en ekki áhugaverð.
Tæknileg umsögn: Tæknileg útfærsla stutt á veg komin.

Simple presentation, limited but interesting.
Technical opinion: Technical implementation not far along.

Tillaga 95 merkt 13250

Catherine Phan Gates
Samstarfsaðili: Franz Zellner
Ástralía

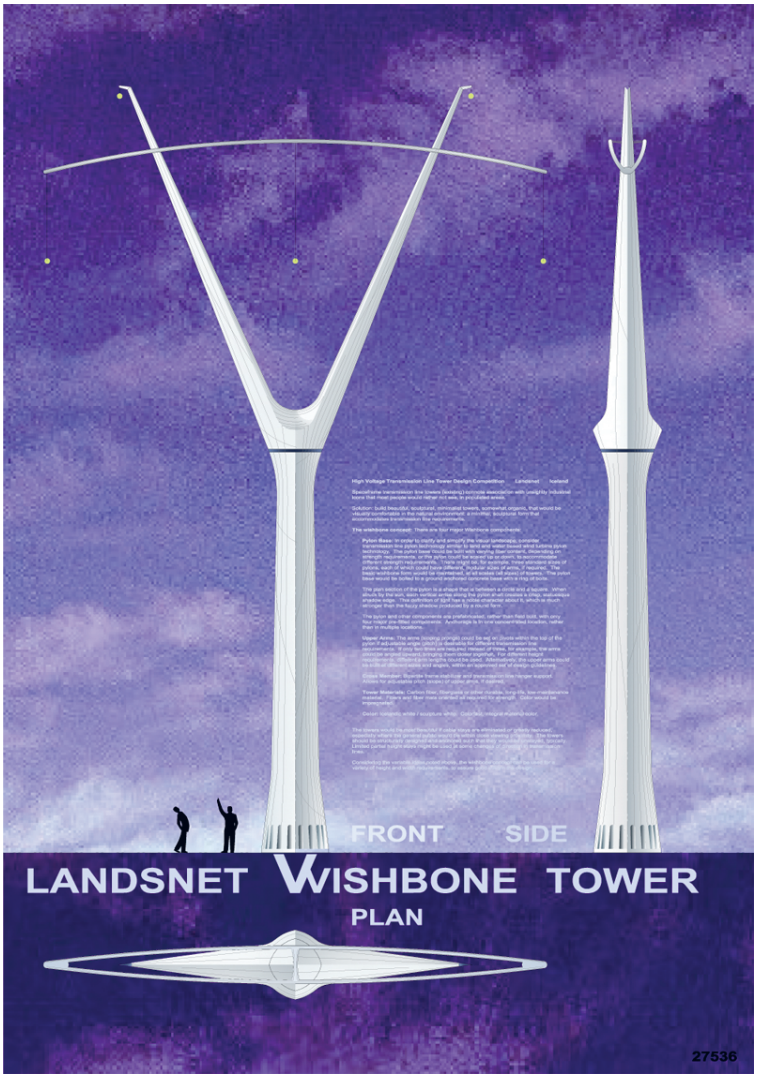


Þunglamalegt burðarvirki með tilvísun til fyrstu stálburðarvirkja, en áhugaverðar tæknilegar lausnir til að draga úr rafsegulsviðsmengun.
Tæknileg umsögn: Mikið ógert í hönnun leiðarauppheng is.

A ponderous support structure with reference to the first steel support structures, but interesting technical solutions to reduce pollution from the electromagnetic field.
Technical opinion: Much left undone in designing power line suspension.

Tillaga 96 merkt 27536

designStream
Fredrick Reeder, AIA Leed AP
Bandaríkin

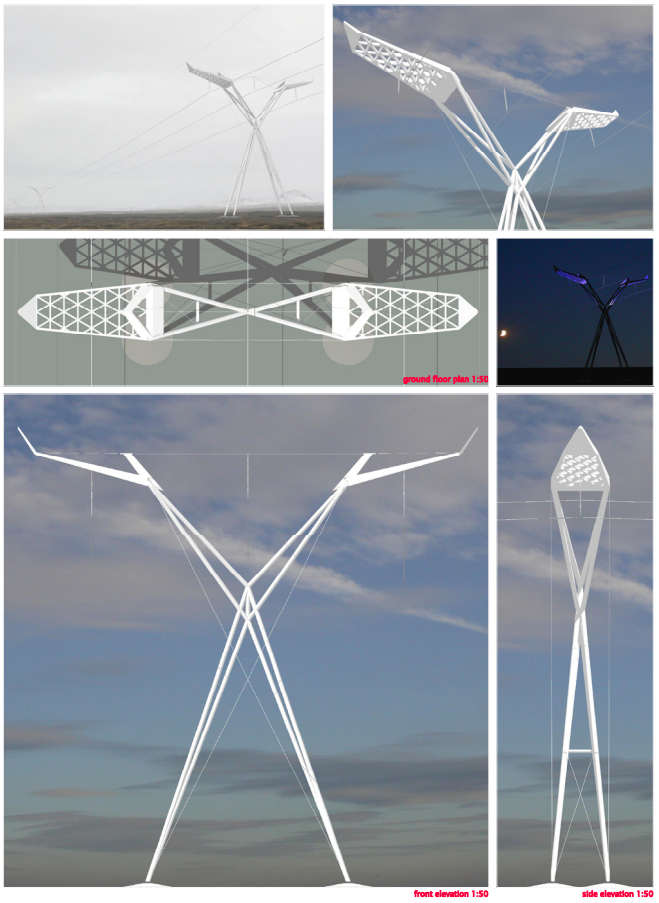


Góð framsetning og einföld tillaga. Burðavirki er þunglamalegt en tæknilega vel útfært.
Tæknileg umsögn: Þekkt lausn en þversláin þarf að vera efnismeiri.

Good presentation and simple proposal. The support structure is ponderous but technically well implemented.
Technical opinion: A known solution, but the crossbar must be sturdier.

Tillaga 97 merkt 50226

Darr + Marx Architecten
Carsten Darr, Dipl. Ing. arch.
Þýskaland

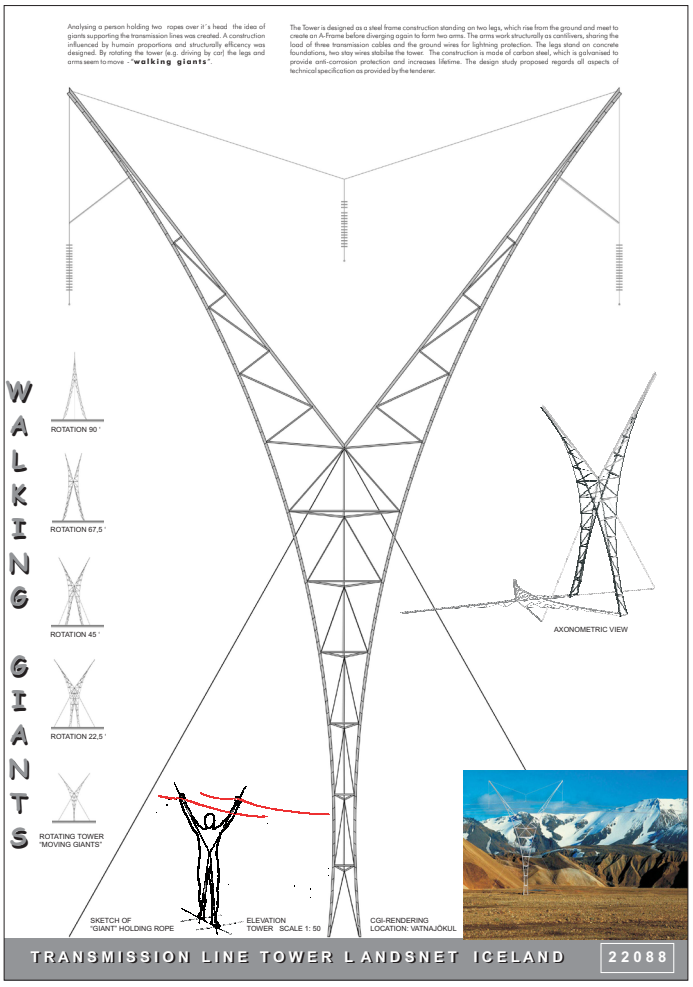


Góð framsetning. Jákvæð, listræn en flókin. Áhugaverð tilraun til að upphefja og auka fegurð forma með lýsingu.
Tæknileg umsögn: Burðarvirki þarf að þróa áfram.

Good presentation. Positive, artistic but complicated. An interesting proposal to exalt and increase the beauty of forms with lightning.
Technical opinion: The support structure requires further development.

Tillaga 98 merkt 22088
1.Verðlaun

Architect Sebastian Krehn
Austurríki



Geysilega fallegt og lifandi burðarvirki. "Hinn gangandi risi" sækir grunnuppbygginguna í mannslíkamann án þess að tákngera hann sérstaklega. Fegurðin sprettur upp af notagildinu, en hinn listræni tilgangur er ekki langt undan. Tillagan líður þó fyrir takmarkaða uppsetningu sem er algjöglega úr takti við hið dýrmæta innihald.
Tæknileg umsögn: Tæknilega möguleg lausn en þarf að þróa áfram hvað snertir upphengi fyrir einangrakeðjur og stög.

Extremely beautiful and living support structure. "The walking giant" takes its basic structure from the human body without becoming particularly anthropomorphized. The beauty springs from utility, but the artistic purpose is not far ahead. The proposal nevertheless suffers from limited installation, which is entirely out of step with the precious content.
Technical opinion: A technically possible solution that needs further development regarding the hanging of insulator suspensions and guy wires.

Tillaga 99 - merkt 17197
Pollack Architecture, David Chovette, Bandaríkin
Tillagan var ekki tekin til dóms þar sem tilskilin gögn bárust ekki.

Proposal 99 – marked 17197
Pollack Architecture, David Chovette, USA
Was not judged since the stipulated documents were not received.

Eftirfarandi tillögur bárust eftir að dómnefnd hóf störf og voru því ekki teknar til dóms:

The following proposals were received after the Selection Committee began its work and we therefore not accepted for judging:

Tillaga merkt 54243
Thomas Hirchmann, Dipl. Ing.
Samstrarfsaðilar:
Benedikt Huyer-May, cand. Arch.
Vincent Sprenger, cand. Arch.
Maximilian Papp, cand. Arch.
Burðarþolshönnun: Brengelmann Ingenieure
Þýskaland

Proposal marked 54243
Thomas Hirchmann, Dipl. Ing.
Collaborators:
Benedikt Huyer-May cand. Arch.
Vincent Sprenger cand.Arch.
Maximilian Papp, cand. Arch.
Structural engineering design **:** Brengelmann Ingenieure
Germany

Tillaga merkt 31015
Bringmann Architekt
Stev Bringmann, Dipl. Ing. Architekt
Þýskaland

Proposal marked 31015
Bringmann Architekt
Stev Bringmann, Architekt
Germany

Tillaga merkt 27179
Bernd Nalleweg
Max Nalleweg
Kyung-Ae Kim
Þýskaland

Proposal marked 27179
Bernd Nalleweg
Max Nalleweg
Kyung-Ae Kim
Germany

Tillaga merkt 17076
KOMPOZIT arkitekter maa
Jakob Hyte Nederby
Danmörk

Proposal marked 17076
KOMPOZIT arkitekter maa
Jakob Hyte Nederby
Denmark

Tillaga merkt 17271
Olga Skaba, Dipl. Ing. Architekt
Samstarfsaðilar: Hartmut Flothmann, Dipl. Ing. Arch. & Design
Þýskaland

Proposal marked 17271
Olga Skaba, Dipl. Ing. Architekt
Collaborators: Hartmut Flothmann, Dipl. Ing. Arch. & Design
Germany

Tillaga merkt 42028
Michael Koch-Kohlstadt, Dipl. Ing. (FH)
Aðstoð: Frank Stiefel
Þýskaland

Proposal marked 42028
Michael Koch-Kohlstadt, Dipl. Ing. (FH)
Assistance: Frank Stiefel
Germany

Viðauki við dómnefndarálit - Myndir frá verðlaunafhendingu

Þórður Guðmundsson, forstjóri landsnets og formaður dómnefndar flytur ávarp.

1. verðlaun. Arkitektinn Sebastin Krehn tekur á móti verðlaunum úr hendi Páls Harðarsonar stjórnarformanns Landsnets.

Verðlaunahafar taka á móti viðurkenningum.

Prentað efni

GuðjónÓ – vistvæn prentsmiðja

Landsnet hf. | Gylfaflöt 9, 112 Reykjavík | Sími 563 9300 | Fax 563 9309 | landsnet@landsnet.is | www.landsnet.is