GLOBAL PV SOLAR ENERGY FINANCE

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Finance model for transition away from hydro carbonates (oil/coal/gas) towards PV solar energy within 5 years.

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"What people need to hear, loud and clear, is that we're running out of energy in America."

May 23, 2001

George W. Bush

INTRODUCTION

PV prices per peakWatt capacity are dropping steadily. This price drop development is caused by availability of a new PV wafer technology. It makes PV more and more also economic attractive. The investment payback time has been reduced severely.

Add to this picture the energy price rise development. Historical energy prices are no longer a reference for further calculations. The current low energy prices are unsustainable: coal will become the most expensive power generation fuel within 5 years.

So it's save to say that the investment payback time will be even shorter than 5 years when energy prices start to rise again due to the economic growth of the emerging economies.

It's safe to conclude that China has taken the lead in PV technology and it's safe to say that all other production nations only can compete with China only be even better technology. The current PV technology of all other nations will not sell any solar modules anymore.

PV has become a same technology driven competitive world as computer memory used to be and China has a head start. Not by low wages, but just by advanced technology. The once with the lowest prices will have the most sales and the technological cycle runs faster in market funded environments. All Chinese PV ingot/wafer/panel manufacturers are able to build each 1 or 2 years a new factory based on the latest technological achievements. This acceleration speed is hard to conquer for other nations.

PV is has now reached the pricing where it is economic ready to roll-out on every roof anywhere in the world. This paper describes the finance model that makes this possible. Instant Global PV solar energy roll-out is the result of PV Price Drops, Energy Price Rises and PV Finance and its date stamp is today.

As we have realized upstream finance possibilities to any mayor market in the world. One simple line with huge impact. This realized upstream facility is more extended described in the first page of this paper, as it is the well/begin of all the rest of the downstream process.

As the upstream finance is already taken care of by Planck Foundation and thereby available for all global markets, is this paper fully focused on downstream facet (finance facilitation and demand creation) in all these global markets.

The combination of this upstream, transaction and downstream model in a digital model delivers a) banks the turnover and attached signing fee / contract interest income they need, b) delivers the economies where the PV will be installed economic activities, c) stops the fossil energy based wealth drain of these economies and d) gives capital local based low risk profits.

Central in the design is a blank label orders focused data engine that facilitates all transactions under any brand/logo, identity, partnering and margin variables.

UPSTREAM FINANCE

DEFINITION - Upstream finance covers every product period till the local delivery momentum in response to a sale. It covers: a) the order period, b) the manufacturing period, c) the factory to harbor period, d) the shipping period to the demand market, e) the custom clearing period in the demand market and f) the stock period in the demand market. In short: every product period till the local delivery momentum in response to a sale.

SOURCE NATION - In this paper China is mentioned the default source/upstream nation. This is done because China has won the global PV manufacturing price/performance battle decisive. China is currently wiping out all global competition just based on the effective combination of each half year improved technology on top of a low assembling cost price. I PV tech China is winning the battle by having enhanced wafer technology, better than all nations. Their volume delivers huge R&D budgets. Other PV producing nations are 2 till 4 times more expensive than China. So the PV manufacturing output of other nations needs an exceptional 2 till 4 times longer period to become economic profitable. From financiers and from operators perspective therefore other nation's PV manufacturing output is not attractive at all anymore.

PARTIES INVOLVED - The upstream finance is a well tuned private/public manufacturer/state organized guarantee/finance model made a compilation based/build on the interest of several upstream stakeholders. A finance method that operates both upstream and downstream is the concept of supply chain finance. This is way supply chain finance has it's own section in this paper, as it covers a complex of upstream and downstream finance.

PV WAFER MANUFACTURERS - Multi-crystalline solar wafers are the principal raw material used to produce solar cells. They are produced in two principal sizes of 125 by 125 mm and 156 by 156 mm, with thicknesses from 180 and 240 microns. So wafers are the semi/basic products/units of any PV module. All the Chinese PV wafer manufacturers are doubling their production capacities at least once each year. This huge volume not only lowers the cost price (like volume always does), but they also have large budgets for R&D, which delivers each year lower production cost and these realized new lines and each year better product specifications (as in: higher peakWatt wafer output). Those two are the main comparative facets of PV wafer manufacturing. China has a head start in PV wafer production that is almost impossible to catch up with, as they still are accelerating each month faster.

PV MODULE ASSEMBLERS - PV assemblers buy the semi-product (PV wafers) of the PV wafer manufacturers and assemble those to the end product. Each PV wafer manufacturer supplies it wafers to many PV module assemblers. Those assemblers are mostly located in the neighborhood of PV wafer manufacturer as they mostly are ran by former employees of the PV wafer manufacturer and use semi-product credit lines of the PV wafer manufacturer. So there are many PV module assemblers around PV wafer manufacturers that use their PV wafers to produce PV modules. And the PV wafer manufacturer gives all the module assemblers supplier credit. In this upstream finance model the PV wafer manufacturer use the upstream model to get more grip on the quality and sales of the end product without actually have to assemble it in house. The ordering, product control and logistics are fully taken care of by the PV wafer manufacturers.

CORPORATE INTERMEDIARIES – In some cases there will be a multi-national corporation as liaison between supply and demand, delivering both sides of the market the demand/supply and price continuity security they both want.

GOVERNMENTAL GUARANTEES - On top of this private (although most large companies in China are partial governmental owned) manufacturer model there is a Chinese export finance guarantee installed. So upstream finance is a model compiled out of credit of the semi product cluster, credit of the end product cluster covered by guarantees of the Chinese government.

COMMERCIAL BANKS – In most cases there will be banks involved (both on the supply side as on the demand side) that make the capital locked-in the upstream model more liquid. Supply chain finance is an example of a demand side driven finance model that can reach into the upstream part of the supply chain.

TRANSACTION FINANCE

INTRODUCTION – Transaction finance takes care of the finance attached to the sales process of PV in a nation. Transaction finance is just about facilitating the financial facet of the sales period (from ordering to payment) of transactions. Transaction finance is not about short/medium/long term finance of the enduser equipment during operation, but just covering the from warehouse by delivery to payment period. The finance facet of transaction could even be handle by the upstream finance model. Transaction finance is about making a model that delivers security of the capital facet. If that is done, the capital facet is no problem. The capital facet can than be easily build on the provided securities.

FACTORING – Factoring is about financing the delivered orders to companies. It covers the ex-warehouse to 'money-in-the-bank' period. From invoicing to payment. The finance covers the purchase level of the deliveries/invoices. Factoring is often combined with insurance, but can be also independent of it.

ESCROWING – An escrow operator delivers security to pre-payers. An escrow receives/administrates and clears prepayments of corporate customers without insurance (which by this have to prepay) and private customers (which often can not be insured). Escrowing is just reversed factoring, therefore escrowing can be deployed in the same model.

SUPPLY CHAIN – If retail chains want to roll-out PV there are two models: traditional and digital. In the digital model the outlets only receive a demo/sales kit that promotes the own label site based on the blank label site engine. Maybe retail chains still want also the traditional (point of sale stock based) model. Than supply chain finance designs a finance model for it. Stand alone or in cooperation with the retail chain financier.

DEBTOR INSURANCE – Prepayment: Insurance on prepayments is not necessary as the escrow structure takes care of that. Post-payment: So the only insurance need is insurance on payment of invoices by debtors. For each nation there is a debtor insurance contract needed. The insurance is based on an online (XML) data query response. Sometimes the factoring supplier is also the insurance supplier, but this doesn't change the model, it only makes the models somewhat easier (is than just one online query/report that handles both), but is often more costly.

LOGICTIC INSURANCE – Warehouse insurance is needed as sea-freight insurance ends as the products enters the warehouse. Transport insurance is needed from ex-warehouse till the product delivering sign momentum (as the products come under the responsibility of the customer). The upstream, stock and downstream finance could be integrated in one overall insurance.

GRADING – Insurance can be replaced by a grading model. Grading is also based on an online (XML) data query response. It gives as return a rating figure for the debtor. With the transaction financier an agreement is made about credit/payment conditions based attached to each rating grade. Grading is about slow payment protection by preventing.

COLLECTING – The paper part of collecting can be done by the engine automatically. With

feedback of payment delay to the factoring supplier and the payment insurance supplier. Under different labels (for example: of a collecting agency). If the paper engine has no result a call center can do phase 2. If the call center has no result a legal collecting agency could do the final phase. Of this will be the collecting agency of the factoring supplier or the insurance supplier (as they use this data in their credit policies to the late payers: the best collecting method there is).

SINGLE – All of the above services could be provided by one single/unique finance services supplier. A supplier that takes care of it all or that delivers process auditing to the upstream based capital issuers. Downstream finance has a multiple supplier structure. Transaction finance has a single supplier structure. The transaction finance supplier could also be the default downstream finance choice in the purchase screens.

CAPITAL – The upstream finance construction could cover also the transaction finance. This as it only is a short term extension of the already in place upstream finance model. The difference is that the products has leaved the security of the warehouse. The solution is to install both debtor and transport insurance. that they Directly or (semi)indirect. In the (semi)indirect model a national/continental market operating financial is used as process controller.

DOWNSTREAM FINANCE

INTRODUCTION – Downstream finance covers the first years of the product in operation, removing the need for own capital for purchasing PV. This finance period can variety from 3 till 6 years, depending on customer choice. Due the recent price drop in PV no longer finance periods are needed. Another huge facet in PV finance is that PV operation isn't based on a moving parts technological concept. By this PV suffers totally not from any wearing out damage like most other equipment. This lowers amortization demand and lowers also the operation costs and make it almost total financial. PV = location + finance.

ENGINE BASED – The whole downstream process (both its sales and its finance) is concentrated in a blank label digital engine. Each reseller, retail chain, installer can brand this technology/facilities in their own name, logo and house style. As almost all of the sales will be done in combination with a finance scheme, this choice for a blank label digital sales/finance engine is a right one.

OPEN MODEL – The downstream finance operates with an open model for financiers. Each financier could take the contracts they like out of the quotation/order pool. The used technology is very similar to the technology behind relation matching sites. Selection models are based on wanted order specifications (as in: finance profiles).

COLLATERAL – The beauty of energy finance is that besides the equipment also the output can be used as collateral. Seizure of the output by payment default will become the heart of energy leasing. If the financials start to understand the concept of output collateral, energy leasing will boom. Not only towards companies and municipals, but also towards households. Certainly as the engine can take care of all the paper work production attached to equipment and output collateral contracts.

SIGNING FEE – The fact that must financials currently have a TierOne deficit (due to client defaults and new legislation) is not a secret. This is a pity in times when liquidities can be acquired from Central Banks almost unlimited if collaterals can be offered and TierOne demands are met. In energy finance the collaterals are good, so that's no problem. The TierOne demand can be solved also. The downstream engine has possibility to define a signing fee on the finance contract. This signing fee can be of the TierOne demand height. Than the TierOne issue is also solved. And liquidities can be tap the needed liquidities out of the open windows policies of the Central Banks. Before the financial crisis, the money creation mostly took place between banks and the Central Banks only had short time liquidity tenders instead of the current open window policies. If the financials start to understand the possibility for putting a signing fee in the above mentioned engine, energy leasing will boom. Not only towards companies and municipals, but also towards households.

RIGHT LEGAL – For solid energy finance there should be a solid property legislation/register and a solid grid legislation/register. The property legislation/register makes it possible to 'attach' an installation to a property, by which placement of the installation is ensured and as the sun always will shine, the output is always created. The grid legislation/register makes it possible to 'seize' the output of an installation by payment defaulting. As combination of those two: the installation will

be in place and produce and the output can be directed to the financier. Good legal that makes massive energy investment possible.

LEASING – Leasing is a finance method currently mainly used for companies, based on the concept that the equipment is the collateral and can be taken away and sold by payment defaulting. Due to the fact that in energy finance also the output can be used as collateral, energy leasing will be different of for example car leasing. Unlike cars: PV operation does almost not wear PV. This make energy equipment leasing so much better than car lease from the perspective of the lease finance suppliers. Of course the ownership/collateral characteristics/legal of the leased equipment will stay in place as insurance against the other creditors of debtor. The concept of seizure of the equipment must be replaced by seizure of the output, although the object can be seized.

LOANS – For loans applies anything the same as for leasing. Only the credit legislation/register applies to it. Loans can also use the equipment isolating legal tool of leasing and the output collateral security.

MORTGAGES – Additional mortgages is also a good/interesting PF finance tool. The engine can take care of the registration of this additional mortgages into the national land/property register.

EQUITY – Financiers could demand equity levels on the investment. For example 20% down payment by debtor. This will be handled by the escrow facility of the transaction finance.

DEMAND GENERATION

INTRODUCTION – When supply and finance are taken care of, the only thing that's needed is demand. Voluminous demand is mainly generated by banks, media, retail chains, installers and social networks.

BANKS – PV is a new economic wave. Banks really seek a new turnover wave. Banks seek new contacts signing fees. Banks seek new interest income. Banks can use liquidities acquired by the open window policies of the Central Banks (Quantitative Easing) to fund these new turnover wave. Just as by media affiliating income models banks can currently fully automatically integrated in any site or newsletter, in text links or free to chose banners, in traditional print (by coupon code system) or even by a branded version of the blank label digital engine (or its implementable API) on it as a separate site (solar.bankname.com / banknamesolar.com) or subfolder on their own site (bankname.com/energy) or social network container. Installation instructions can be chosen easily, own or third party installers can be chosen very easily.

MEDIA – Media income by subscription fees and advertising fees are declining rapidly. Media needs new additional income models. Media affiliating delivers media additional income, based on effect based advertising income: giving a media a piece of the action of the margin made on sales of the products based on advertising for that product. Affiliating income models can currently fully automatically integrated in any site or newsletter, in text links or free to chose banners, in traditional print (by coupon code system) or even by a branded version of the blank label digital engine (or its implementable API) on it as a separate site (solar.medianame.com / medianamesolar.com) or subfolder on their own site (medianame.com/solar or medianame.com/energy) or social network container. PV is a new economic wave. Media needs income. PV operators needs media exposure. The engine facilitates both demands/wishes integrated. Each sale will give the medium that delivers it a fee. Fully automatically. Installation instructions can be chosen easily, own or third party installers can be chosen very easily.

RETAIL CHAINS – PV is a new economic wave. Retail will try to profit from these huge market. The can do this by the traditional import/distribution/retail model or the can use the digital facilities: Just as by media affiliating income models retail chains can currently fully automatically integrated in any site or newsletter, in text links or free to chose banners, in traditional print (by coupon code system) or even by a branded version of the blank label digital engine (or its implementable API) on it as a separate site (solar.retailchain.com / retailchainsolar.com) or subfolder on their own site (retailchain/energy) or social network container. PV is a new economic wave. Retail chains and their outlets needs income. PV sales has two extra facet on top of the normal sales procedure: financing and service. These two are the main reasons why retail chains will chose for the digital instead for the traditional stock/physical trade based model. Any retail chain will sell PV in by this model: it's a voluminous market and entering it is simple: just some in-store and in-own-media exposure and it starts rolling. Installation instructions can be chosen easily, own or third party installers can be chosen very easily.

INSTALLERS – Just like the streets are now loaded with telecom shops, or just as the roads where full of IT people, the energy investment wave will give for a period of 5 years an explosion of

energy installation installers. Both small, medium and big sized. All these will use easy to brand virtual facilities as these gives the customers direct insight in the transaction process/status. Also here almost all sales will be done based on finance of the PV installation by the installation users. Users can rate installers and post comments on their performance.

SOCIAL NETWORKS – Social networks are often called Web 2.0, or the user driven content and user driven marketing development. Social networks have completely overgrown any other media consumption, even newspapers and TV. The users are facilitated. By the core engine and by other functionalities. Open Social is the inter social network protocol that can be used for this. Making it virtual, users can start easily their own group with (!) demand concentration facilities. The can do this for free or even with a margin for them. Banks, media, retail chains and installers also can use this Open Social based technology branded with their own brands.

OPEN PLATFORM

INTRODUCTION – W

C

OPEN SUPPLY

INTRODUCTION – W

C

OPEN FINANCE

INTRODUCTION – For success (as in: volume) the model should be platform based and open to each market party.

USER DRIVEN – User driven content and user driven marketing will replace a substantial part of the information/communication on the Internet.

MEDIA DRIVEN – T

LARGE CUSTOMER BASES – D

PRODUCT CHOICE – T

FINANCE CHOICE – T

SUPPLIER CHOICE – T

DEMAND CREATION – T

DEMAND CONCENTRATION – T

DEMAND – T

OPEN MARKETING

INTRODUCTION – W

C

AUDIT FACILITIES

INTRODUCTION – Auditing ensures the upstream, transaction and downstream financiers that the reported status of their assets is accurate. Auditing facilities are very important facets in building a finance model that is able to handle enormous volume.

LIVE DATA – Auditing in rapid expanding finance models needs to be done live/continuous, anytime a stakeholder wants to audit, it must be possible. Not continuous, not live auditing is no real auditing at all is a vision that grows in almost any market and sure is applicable to fast growing models. Any finance model with live auditing possibilities is able to attract large capital flows. It's just a matter of comparativeness in finance: the easiest/best to audit models will get more capital flows. As other finance models gets less live and more historical, finance models that offers live auditing will gain market share significant.

TRANSPARANCY – Live auditing needs full transparency in accounting, otherwise it just a continuous historical auditing process not based on actual live data. Without transparency in accounting any auditing (live or historical) is useless, but live auditing needs transparency as basis. Transparency makes it possible to understand and audit a) the whole model (with all its assets and liabilities) and B) all the underlaying assets and liabilities very easily and 100% certainty.

SYSTEM – Each involved party has access to the general part of other parties driven auditing of the model. This insures wider/better auditing results. As the finance model is facilitated in one single digital engine auditing is made very easy. The position and status of each asset is easily to audit. By these accurate live auditing possibilities the finance model will attract large capital flows that now run thought less transparent systems.

LEGAL FACILITIES

INTRODUCTION – From financiers perspective PV needs some special legal facilities to give the financier more security on the finance. If these legal environment is installed PV finance will boom, so these legal facets are very much in the interest of the respective nations.

LOCATION LEGAL – If the location of PV (and access to it) can be ensured by property register legislation, the financiers are certain of the output regardless the financial status of the debtor. This simple line will boost PV finance very much. In most nations there's already the possibility to 'attach' additional rights to a property in the national property register that stays attached the property if the property is sold and gives the financier inspection/maintaining access rights. As the sun always will shine and the location of the power harvesting equipment (and it's maintenance) is insured, the financier know that the investment will produce a ROI for certain. This is a very important unique facet of PV finance: no other investment delivers so much security as PV covered by this property legal. When financiers starts to understand this, the will all dive deep and wide in the PV finance market.

OUTPUT LEGAL – In almost all nations there is already an independent power grid authority installed. If a PV project is registered as a separate grid connection, the financier can take not only take the PV installation as collateral, but also take the output as collateral (with just one standard document, already signed by the singing of the finance contract.

RESULTS – PV location and output certainty delivering legal will stimulate the capital flow to PV enormously, as the quality of the collateral rises significant and reaches almost 100%. Creating a load of mega watts in decentral (on location) power generation, stimulating the economy, transit the economy into a more environmental/economic sustainable direction.

WARRANTY FACILITIES

INTRODUCTION – Warranty has only a functional/accessible value in reality when it's issued/offered by a national corporation or body. Without local presence warranty has no real value/function at all. From transaction financiers and downstream financiers perspective a local/domestic presence of warranty is a crucial facet. As most PV will be produced in China and sold in other nations, its important to establish a national warranty fund in each nation. Each comparative warranty offer that has no domestic presence is just a promise build on quick sand with no guarantees at all.

COST PRICE – The current warranty offers of PV are beyond reality. This is a polite description, the reality is that most of warranty is just a bunch of fake promises). All PV suppliers offers 5 years on construction, 10 years on 90% performance and 20 years on 80% performance, with no backing financial facility at all. Guarantees are just another product what the enduser (or the trader) can purchase. There's not enough proven data on the life time and historical performance of PV. To be able to provide a good warranty this should be seen more as an commercial insurance service. This functional insurance fee will be 4% per year, payable at front or as monthly/yearly fee only if contracted from start of the investment. First month of warranty (covering construction defects) is free, this maybe can be extended to one year (and 4% on top of the price than should be cashed and transferred to the warranty fund.

MAINTENANCE – Maintenance could be integrated in the warranty model. Maintenance takes care of configuration issues. Theft and damages are no warranty nor maintenance issues and should not be covered by default in extended warranty models. This as theft and damage are vulnerable to abuse and abuse would poison attractive price/performance ratios of warranty/maintenance plans. Theft and damage insurances could be woven in (as part of the turnkey vision), but should be fully/partially external placed/covered. Maintenance suppliers could tender their services in the central engine.

FUND PRACTICE – Operator: The warranty guarantee fund will be operated by a local/national corporation with the right licenses to do so. Operation: fully outsourced to a third party. Capital: The capital of warranty prepayments will be used as equity for 1) the stock and 2) energy as ROI (hedge against declining currencies and rising production energy prices). Profit: The fund operators get 10% of the profit, the other 90% will stay in cash.

INFORMATION FACILITIES

INTRODUCTION – As the main part of sales (due the product attached finance need) will be realized online by third parties within the blank label digital PV sales/finance engine, there's a need for a good pre/during/post service level. As the one way communication is good, the need for expensive two way communication will be substantial.

DATA – On the engine site must be easy accessible information in virtual/blank label technology available: a) Good/clear short/extended explanation/information/instruction. b) FAQ (Frequent Asked Questions) list, that is feed by and changed based on call center responses (as it is also the knowledge base the call center is using). c) Information index facilities. d) Information query facilities. e) Possibilities to ask questions to voluntary representatives. f) Possibilities to ask online questions to installers. g) Information rating facilities. h) User response facilities (web 2.0: user driven content). i) Possibilities to ask questions by form, email, chat, voice, video (this two way communication is explained more in detail below this paragraph).

IMAGES – People prefer images above texts. An structured image gallery will do as much communication as a load of texts. Tree wise index, database driven index by the use of keywords.

VIDEO – People are getting more and more 'web page tired'. People prefer video very much more than web pages. Good/short information/explanation/instruction videos will have a big audience. By videos people can relax 'consume' the info they need.

COMMUNICATION FACILITIES

INTRODUCTION – One way communication (regardless the quality of it) never will cover all information demands that are present by the target groups. Besides that rational fact, there is also an irrational fact: sometimes people just first wants to talk to a supplier before ordering anything. It's important to know that the 'digital only generation' is only a small part of the target group of PV sales/finance. This two way communication can take place by by form (delayed), email (delayed), chat (real time), voice (real time) and video (real time).

USER/USER – As a mayor role in the PV marketing is for user driven (social network based) marketing, the user to user communication will be the largest communication stream. It even don't needs to be facilitated as the network sites, but it will be a part of the PV Open Social container (to make cross platform user/user communication possible).

USER/INSTALLER – If an user decides to use an installer most of his questions will vanish away or be discussed in communication with the installer. The user/installer communication will be facilitated by the network sites, or (by extra/cross network communication) by the PV Open Social container.

USER/HELPDESK – After good data, images and videos information, after user/user and user/installer two way communication, there still be questions that requires two way communication. This will be handled by the Open Social container and will be redirected to a) volunteers (there a lot of people out there who want to support the energy transition towards renewable very much, volunteers are often very qualified due to their deep interest in the subject) and b) paid employees. Employees are cost full so this last line must be needed as less as possible due to good functioning earlier lines. The employees will have temperately and freelance contracts and will work mostly online out of their homes logged into the communication engine.

MAINTENANCE FACILITIES

INTRODUCTION – PV installation owners just want power without extra work. A maintenance program is very much in their benefit. PV Financiers also have an interest by right maintenance, as the output generates the income that pays them the loan back and the interest attached to it. Maintenance (function insurance) is not as important as legal (location insurance) as the sun needs no maintenance, but good maintenance will certainly deliver higher outputs and is therefore in the interest of both the PV installation owners and the PV financiers. Maintenance could be integrated in the warranty model. Maintenance takes care of configuration issues. Theft and damage insurances could be woven in (as part of the turnkey vision), but should be fully/partially external placed/covered.

CONTRACTS – Maintenance contracts takes away the maintenance sorrows from both PV installation owners as PV financiers. It delivers turnkey production for those who like that concept. There will be blank label model maintenance contracts in central data engine.

INSURANCE – Making it real turnkey is adding (prepaid) 'insurance' that delivers maintenance. Insuring the delivery of maintenance and thereby the production output. This functional insurance is already covered in the Warranty Facilities section of this paper. To be clear: this insurance is a functional guarantee, it doesn't cover missing by theft, nor damage by extreme weather, nor molestation by other causes. That risks needs to be covered by other insurance. This product theft/damage insurance can maybe be integrated in the whole package, but its very important to understand that such an insurance is very vulnerable to abuse and by this it can repress the price/performance ratio of warranty/maintenance insurance. The warranty/maintenance insurance can not be abused in any way, which makes it a good product with a high price/performance ratio.

SUPPLIERS – There will be both maintenance suppliers, incident handling suppliers and insurance suppliers. In some cases two or all three of these could be integrated in one supplier. Local suppliers can offer the best service against the lowest price. The central engine makes it possible for the PV ordering company/household to chose the suppliers they want.

COLLECTING FACILITIES

INTRODUCTION – In PV collecting is not focused so much focused on the PV loan debtor, but rather more on the PV installation output. The moment financiers starts to understand this simple truth, they will fall in love with PV finance very intensely.

DEBTOR – Collecting first will be focused on the debtor, telling the debtor by email, sms/text message, letter, database drive data to voice phone and database driven personal phone that payments have passed due dates. This process could be automated by IT and or the financier or third party callcenters can be used to do this calls.

OUTPUT – When the debtor focused collecting has no effort, normally financiers than start the legal procedure towards a court case. In PV finance this is not necessary as the energy output can be seized easily by just sending a (digital) form to the grid operator. This should be done temperately, never permanent, just for the period to bring the balance right plus an escrow security level. This is fair business and will be accepted by everyone. The cost of seizing the output by the grid operator will be added to the finance balance of course.

PREPARATION – This possibility of seizing the output with out expensive collecting procedures and court costs is the reason why financials, when the start to understand PV finance, will love it. There is no other type of finance that offers this build-in collection possibility.

HANDLING – The handling of collecting towards the debtor is database driven. The handling of the second phase of collecting (towards the energy output) is also database driven. At the signing of the PV finance contracts there's also a output collateral signed. This collateral can be exploited by just one message to the grid operator. All these actions are database driven (the output collateral paper can be accessed digital in PDF), so calling towards to debtor is the only thing that must be done 'in real life'.

WIN FACILITIES

INTRODUCTION – Sales needs special offers, as part of recurring communication, as contact momentum, as image creation or image enforcing and as special attention creation in marketing. Special offers can be a special price, or a special product, but it also can be a win model. Win models can have two appearances: A product sales attached model: 1 on each 100 or 1000 sales delivers the product for free. Or a product lottery based model: paying a little delivers the chance on getting the product for free.

PRODUCTS – The main product will be a roof PV installation for a household. For variety reasons other new electric products can be brought into the communication mix. Things like electric cars.

VIRTUAL – Both the win models are virtual and can be used by all operators under their own brands. This gives retail chains, banks etc. an instant win model as special offer in their marketing. The governmental licensing is done central per geographical. Auditing will be done external.

LICENSING – The licensing of the product sales attached model is easy. The licensing of the product lottery based model is somewhat harder but due to the narrow focus licenses are issued due to this narrowed focus.

TEMPLATES – The marketing templates covers also the both win models. So market parties can start instant with those models by just adjusting text/data/images to the action specific situation. Easy and fast implementable is a huge windfall.

INCOME – With the win model every company/organization with an own communication volume can instant access directly income streams both the win/lottery market as the PV and/or electric car market. The win actions will be used by them for income generation on their communication volume. This can be by product sales margin based by the sales attached win model (x% of the sales as margin), or can be by the lottery based win model based (15% of lottery sales), or a combination of both. As everything is virtual branded, they can offer all this in their own brands, without any handling work at all for them.

OPERATORS – The win model will be operated by banks, insurers, creditcard companies, credit unions, retail chains, media (print, radio and television), unions, environmental groups, municipals, etc, etc. By the win model every company/organization/medium can gain an income stream on the huge coming energy transition wave and/or improve their green image and/or contribute from ideological/economic perspectives to the energy transition away from hydro carbonates towards renewable energy harvesting/use and by this taking care of a more stable/cleaner future and stopping the export of wealth due to the import of hydro carbonates.

VOLUME – The win actions will lead to a huge communication volume. Something that is very important in transition (as it changes odd towards regular: it breaks psychological barriers).

OPERATOR TEMPLATES

INTRODUCTION – For easy/fast rolling out the model in a country there should be a national roll-out template developed. Due the virtual characteristics of the core platform, there is no local/national technology needed, just contacts and contracts with banks, media, retail chains and network sites. The combination of virtual technology, a national template and an instant realization characteristics make it possible to get platform up and running in a nation without a month.

FRANCHISE MODEL – Hierarchical models deliver an unwanted build-in realization deceleration (negative acceleration). An the other hand franchise based models unleashes/multiplies all the efforts/input of each party involved. Franchising can have a closed or an open design. A closed design grants unique geographical rights to parties and by this only rule out the negative effects of the hierarchical model till that level, below that level they still exists. Therefore the franchise model is open without any unique geographical grants. May the best do the most business.

ACADEMY – To understand the model and the technology better people/organizations interested in franchising the engine can follow both digital courses as in real life courses which will be given based on the digital model in Amsterdam and later-on also on other continents. Incorporation, house styling, translation, facilities and media/sector deals can be made during the Academy time. The Academy also will be function as an education center for governmental officials that wants to lean about Energy Economics, Energy Politics and Energy Finance. This will be the main source of income that could be used to grant other students a free (online) education in this knowledge area.

INCORPORATION – Incorporation is the first thing to do. If the operator is an existing legal identity this is of course not necessary.

HOUSE STYLING – House styling is something that can be done before the incorporation date, so that the house style will be ready from day one. The house style must be different from the engine logo.

TRANSLATION – After incorporation the next thing to do is making the core engine available in local languages and with local contact information. The core digital engine is global and has a virtual design regarding languages, settings and brands. Making the core engine available in another language is just translating a language file that holds all the texts and publish this file in the core engine attached to the main internet domain (domain.com/language) or attached to a new local domain name that in DNS redirects to the core engine.

FACILITIES – All the needed service structures must be installed. As humans are far from perfect, checks and balances are very important. This involves information, communication, capital, escrow, maintenance and similar issues that needs to be covered before being able to start. All this functions can also be acquired from the international organization in the start period, but they must be covered within a year by national seasoned services.

WIN MODEL – When also a win model is attached, the win model needs a license from the local/national government, but this kind of retail win action similar licenses will be issued very easily and will be administrated by a special unit.

MEDIA – The next step is the kickoff media campaign. This is done by finding the first media partner. Finding more media partners after the first will be as easy as breathing (as they will call by themselves the same day an other media runs the campaign). The kickoff campaign is part of the marketing templates and just can localized by translation and picturing.

SECTORS – The national/regional operators can use the sector templates. These give them direct communication models with all relevant sectors. A complete approach from sector research till just to translated communication/marketing material. From why a sector is interested till, via how to approach them, till delivering them the communication/marketing material they need for contacting their customers. An short example: the telecom sector with its operators. Telcos need to diversify their income and realize better ARPU (Average Revenue Per User). They can green wash their image by just sending one SMS / text to their customers that they got 5% discount on PV if they use a coupon code. The sector templates deliver 'ready to roll' concepts for all voluminous (and by that interesting) sectors.

MARKETING – The national/regional/municipal operator can use all the marketing templates the global organization has made. They can season them locally, both in texts, speech, pictures and footage. The marketing templates deliver 'ready to publish' communication concepts that are tuned based on maximum outcome.

LIFETIME – A geographical unit on a global engine has as tailwind a fast kick start, but as headwind both a bottleneck and a cost post. For this reasons the national template advises only kick starting for a short period organization. As parable could be seen the birth of birds and their quick independence after one of two years. Is everything up and running the only objective could be to implement new energy related capital products into the model (like electric cars, electric delivery trucks, standalone windmills, roof windmills, air conditioning units, micro DC units, micro storage units, or even building embedded insulation or street lights, etc, etc). For bottleneck preventing issues more units in a nation can start using the national template. Otherwise -by for example mismanagement- a whole nation could not 'fly' into the model. As installation and/or service is attached to those products there also will be a lot of pure regional operators that limit their presence within geographical borders.

MANUALS IN PDF – There will be manuals in PDF format, describing all possibilities and connected engine facilities.

MANUALS IN VIDEO – There will be manuals in a closed video environment, describing all possibilities and connected engine facilities.

SECTOR TEMPLATES

INTRODUCTION – To facilitate a fast/easy global roll-out in the relevant/interesting voluminous sectors, there must be developed sector templates that use/feed the core engine. Specialized tailored/customized templates that delivers instant the needed volume in communication plus a technological environment for a sector of the economy on the core engine.

MEDIA – Media needs new income sources very fast. PV can be one for them. The old media business model of paid content (advertising) and paid distribution (subscription fees) has lost its power. The PV market will be huge and if media can get a piece of this action by media affiliating models they certainly will go for it. Media just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something media are always interested in. This could be supported by a media user discount on PV. Media always seek benefits/incentives for their users. For serving the media sector there will specialized operators be initiated, as it's a specialized sector that needs to be reach within their culture and with sector knowledge.

FINANCIALS – Financials in the Western World need a new business model ASAP, as Western World's economies no longer grow, they come in dire straits. PV deliver them a new and voluminous market in purchase power and/or spending that otherwise without interest margin possibilities will be exported. Financials will love PV as no other will love it. It give financials an interest income on energy spendings. Banks just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something financials are always interested in. This could be supported by a financial customer discount on PV. Financials always seek benefits/incentives for their users. For serving the financial sector there will specialized operators be initiated, as it's a specialized sector that needs to be reach within their culture and with sector knowledge.

NETWORK SITES – Network sites need income. They search models that will deliver them the wanted/planned ROI on their huge investments. The acquiring/growth of customer/subscriber volume is no longer the main management focus, that has become exploring this huge customer/subscriber bases. PV can do this for them. PV would give them an income on the energy demand of their customers/subscribers for a very long period. Energy spending is not a small part of everybody's monthly expenses/budget. Long and substantial income is what they're looking for. PV can deliver it to them. Network sites just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something network sites are always interested in. This could be supported by a network site user discount on PV. Network sites always seek benefits/incentives for their users. All technology is Open Social based, so it can be implemented instant on each social network site. For serving the Web 2.0 sector there will specialized operators be initiated, as it's a specialized sector that needs to be reach within their culture and with sector knowledge.

RETAIL CHAINS – Retail chains just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something retail chains are always interested in. This could be supported by a retail chain customer discount on PV. Retail chains

always seek benefits/incentives for their users. For serving the retail sector there will specialized operators be initiated, as it's a specialized sector that needs to be reach within their culture and with sector knowledge.

ENERGY COMPANIES – Energy companies just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something energycos are always interested in. This could be supported by an energyco customer discount on PV. Energycos always seek benefits/incentives for their users. For serving the energy sector there will specialized operators be initiated, as it's a specialized sector that needs to be reach within their culture and with sector knowledge.

TELECOM COMPANIES – Telecom companies face some difficult years. Call/text income will disappear and be replace with bandwidth income. Bandwidth is standard product in which the only market tool is price. ARPU (average revenue per user) will go down and technological demand will go up. Telcos will welcome PV sales as a way to increase ARPU one time to be able to stay flooding during the needed investment wave. What telcos had to been done is finding income in the data stream, but they haven't. Telecom companies just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something telcos are always interested in. This could be supported by a telco subscriber discount on PV. Telcos always seek benefits/incentives for their users. For serving the telco sector there will specialized operators be initiated, as it's a specialized sector that needs to be reach within their culture and with sector knowledge.

INSURANCE COMPANIES – Insurance companies have large customer bases of people seeking security (their asset), but they're under enormous market pressure by low cost digital only operators. Insurance companies both need new income models as customer actions. Insurance companies just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something insurers are always interested in. This could be supported by an insurer customer discount on PV. Insurers always seek benefits/incentives for their users. For serving the insurance sector there will specialized operators be initiated, as it's a specialized sector that needs to be reach within their culture and with sector knowledge.

CREDIT CARD COMPANIES – Credit card companies have large customer bases (their asset), but face very difficult times due to a) payment defaults due to economic decline and b) governmental legislation that tops the maximal to charge interest (now sometimes cumulative even 30% annual). They need a new business model with new/diversified sources of income. Credit card companies just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something credit card companies are always interested in. This could be supported by a credit card user discount on PV. Credit card companies always seek benefits/incentives for their users. For serving the creditcard sector there will specialized operators be initiated, as it's a specialized sector that needs to be reach within their culture and with sector knowledge.

FARM BARN ROOFS – Farm barns has large roofs. More and more farmers operate the triple play formula: crops, live stocks and energy. By the PV price drop, PV has become more attractive than

wind (which is currently the preferred farm based energy harvested method). Any farm barn roof will have PV. In ownership of the farmer, or the farmer will rent his roof space to a third party. For serving the agricultural sector there will specialized operators be initiated, as it's a subculture where personal contact plays the main role.

MUNICIPALS – In Europe most of the early energy companies (end of 19th, start of 20th century) were municipal initiated. Municipals have an interest in energy transition as it is a direct practical insurance for their local economies when the price of hydro carbonates is rising and drains their economies. Municipals just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something municipals are always interested in. This could be supported by a municipal discount on PV. Municipals always seek benefits/incentives for their users. For serving the municipal sector there will specialized operators be initiated, as it's a specialized sector that needs to be reach within their culture and with sector knowledge.

DISTRIBUTORS – Distributors just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something distributors are always interested in. This could be supported by a distributor customer discount on PV. Distributors always seek benefits/incentives for their users.

INSTALLERS – Installers just can log in and configure any type of campaign they like. This could be supported by a win action model. Actions are something installers are always interested in. This could be supported by an installer customer discount on PV. Installers always seek benefits/incentives for their users.

MANUALS IN PDF – There will be manuals in PDF format per sector, describing all possibilities and connected engine facilities.

MANUALS IN VIDEO – There will be manuals in a closed video environment per sector, describing all possibilities and connected engine facilities.

MARKETING TEMPLATES

INTRODUCTION – Besides the Operator Templates and the Sector Templates there will be Marketing Templates that deliver instant usable marketing material.

VIRTUAL ENGINE – As the engine is virtual a full functioning site is up and running as easy as making an core engine account with some basic data and uploading a logo. All other marketing materials function as feeders towards this virtual own site, that takes digitally care of most of the (trans)action work. The engine is has multi layer marketing technology. By this multi layer marketing technology operators have the possibility to connect third parties based on margin sharing: they the initiation and management, the third party the market exposure in/by their own media.

ADS IN PDF –

LEAFLETS IN PDF – B

RADIO – B

TELEVISION – B

ORGANIZATION CHART

FRONT OFFICE
virtual site – virtual helpdesk

MEDIUM OFFICE
corporate site - sectors - geographicals

BACK OFFICE
design – logistics – accounting – auditing – purchase – instruction – mounting – legal - finance

CORPORATE SITE

INFORM	**START**	**EXPOSE**	**EARN**
MEDIA	MAKE ACCOUNT	FREE TOOLKIT	RETAIL: 10%
DEALERS	UPLOAD LOGO		
RETAIL CHAINS	START EXPOSE	VIRTUAL SITE	CHAIN OR MEDIA: 5%
INSTALLERS		OWN SITE	
BANKS		CSS	
INSURANCE COMPANIES		API	
TELCO COMPANIES		BANNERS	
POWER COMPANIES		RSS	
GOVERNMENTS		TWITTER	
MUNICIPALS		EMAIL	
SOCIAL NETWORKS		OPEN SOCIAL GROUPS	
IDEALISTS		PDF LEAFLET	
PROMOTERS		MEDIA AFFILITING	
		ADVERTISING KIT	
		TV COMMERCIALS	
		RADIO COMMERCIALS	

PAID ADDITIONALS

LEAFLETS
INSTORE KIT
FLAGS
STREET BANNERS
POSTERS
CALLCENTER

ABOUT US – NEWS - PLANNING

VIRTUAL RETAIL ENDUSER SITE

INFORM – ORDER – STATUS – SUPPORT

VIRTUAL BRANDED | VIRTUAL LINGUAL

FUNCTIONAL LAYERS

GLOBAL MARKETING SYSTEM
WITH
VIRTUAL BRANDED / VIRTUAL LINGUAL TECHNOLOGY

INITIATION

MARKETING LAYER

PRESENTATION LAYER

PRODUCT LAYER

MOUNTING LAYER

SUBSIDY LAYER

ORDER LAYER

USER LAYER

GROUP LAYER

PAYMENT LAYER

ACCOUNTING LAYER

FEE LAYER

AUDITING LAYER

CORE LAYER

MODULE LAYER

SERVICES LAYER

CONSOLIDATION

SERVICES LAYER

CLOUD LAYER

HARDWARE LAYER

CONNECTION LAYER

Planck.

FUNCTIONAL DIAGRAM

OPEN FINANCE PLATFORM FOR THE COMING ENERGY TRANSITION INVESTMENT WAVE

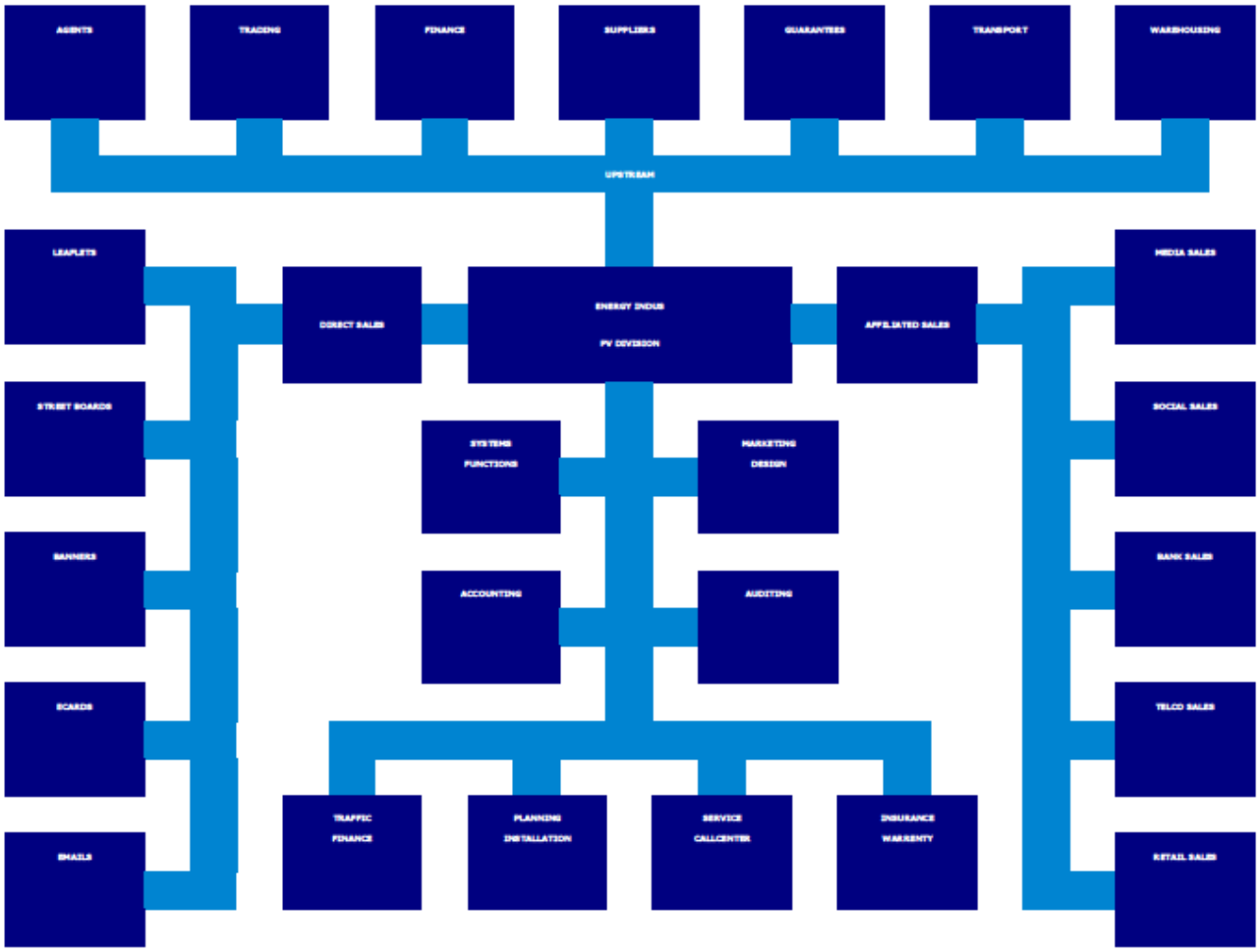
VISUALIZING THE CREATION OF AN ENERGY INVESTMENT FOCUSED 'JOINT GOOD BANK' MODEL AS POSITIVE ALTERNATIVE FOR THE WIDELY DISCUSSED 'JOINT BAD BANK' MODEL
FUNCTIONAL DIAGRAM IN 2D (WITH THE COSTS PERCENTAGES SPECIFIED) THAT VISUALIZES CURRENT DEVELOPMENT WITHIN PLANCK FOUNDATION AND INDUS CORPORATION

KALE PRODUCTIE PLUS INSTALLATIE KOSTPRIJS IS 100%, DE ADDITIONELE KOSTEN ZIJN IN HET EERSTE JAAR 20 x 1% = 20%
HET OPEN CALCULATIE MODEL MAAKT KOPERS TOT VERKOPERS OMDAT MEN ZO DE TRANSPORT/INSTALLATIEKOSTEN KAN REDUCEREN
LAGE KOSTENOPSLAG EN OPEN CALCULATION LEIDEN TOT ZEER CONCURRENDE PRIJS/PRESTATIE VERHOUDINGEN VAN DE ENERGY INVESTMENTS
IN HET TWEEDE JAAR ZAL DE KOSTEN OPSLAG KUNNEN REDUCEREN NAAR 15% (DAAR MEER LANDEN GAAN BIJDRAGEN AAN DE VERSCHILLENDE FACETTEN)
VANAF HET DERDE JAAR VAN OPERATIONEEL ZIJN IS EEN KOSTEN OPSLAG PERCENTAGE VAN LAGER DAN 10% MOGELIJK

* financials hebben 0% kosten per contract, het platform handled alles, zij hoeven alleen hun profiles te definiëren, dus zowel rente interestmargin/contractfee/incomeshare**** zijn 100% netto
** het ligt in de lijn van de huidige economische en energie situatie dat de staat zal komen tot een feed-in wetgeving, zijnde dus een soort staatsgarantie vormgegeven als een beneficiary guarantee
*** if wanted the 1% state guarantee fee and/or the 1% commercial guarantee fee could be directed to the internal guarantee fund, the unclaimed 1% market fee could flow into the internal guarantee fund
**** income sharing is about the financials taking as part of the finance contract a part of the power production (mostly 5%) as an additional finance fee giving them extra futher income when energy prices rise

Glanch.

ORGANIZATION DIAGRAM



EXAMPLE PEAKWATT CALCULATIONS

WITHOUT VALUE ADDING TAX

	SITUATION 1 (internal dealerships)			SITUATION 2 (media/socialnetworks)			SITUATION 3 (retailers)		
MODULE	€ 0,75			€ 0,75			€ 0,75		
INVERTER	€ 0,10			€ 0,10			€ 0,10		
MOUNTING	€ 0,05			€ 0,05			€ 0,05		
COSTPRICE TOTAL	€ 0,90	60%	100%	€ 0,90	63%	100%	€ 0,90	67%	100%
MARGIN (SERVICE/TRANSPORT)	€ 0,55	40%	66%	€ 0,53	37%	49%	€ 0,45	33%	50%
TURNOVER	€ 1,50	100%	166%	€ 1,43	100%	149%	€ 1,35	100%	150%
NO FEE	€ 0,00	0%							
EXPOSE FEE				€ 0,08	5%				
RETAIL MARGIN							€ 0,15	10%	
CHAIN MARGIN									
ENDUSER PRICE	€ 1,50			€ 1,50			€ 1,50		

	SITUATION 5 (retail + expose)			SITUATION 4 (retail + chain)			SITUATION 6 (retail + chain + expose)		
MODULE	€ 0,75			€ 0,75			€ 0,75		
INVERTER	€ 0,10			€ 0,10			€ 0,10		
MOUNTING	€ 0,05			€ 0,05			€ 0,05		
COSTPRICE TOTAL	€ 0,90	70%	100%	€ 0,90	70%	100%	€ 0,90	75%	100%
MARGIN (SERVICE/TRANSPORT)	€ 0,38	30%	42%	€ 0,38	30%	42%	€ 0,30	25%	33%
TURNOVER	€ 1,28	100%	142%	€ 1,28	100%	142%	€ 1,20	100%	133%
NO FEE									
EXPOSE FEE	€ 0,08	5%					€ 0,08	5%	
RETAIL MARGIN	€ 0,15	10%		€ 0,15	10%		€ 0,15	10%	
CHAIN MARGIN				€ 0,08	5%		€ 0,08	5%	
ENDUSER PRICE	€ 1,50			€ 1,50			€ 1,50		

Glanch.

EXAMPLE BRANDED LEAFLET

(example of both in language -dutch for holland- and in vat localized leaflet template)
(a not layouted yet version, just delivering an impression of the data)
(such and similar items are part of the marketing templates)

ROOF SOLAR ENERGY

Solar panels zijn een erg aantrekkelijk vorm van vermogensbeheer in eigen beheer: waarde geld neemt af, prijs van energie neemt toe.
Solar panels reduceren de wealth drain/export by fossil energy imports en reduceren vervuiling door verbranding van fossil energy resources.
Solar panels geven energy independency en off-net power redundancy, zij zorgen voor minder geopolitical energy tensions.

Solar panels zijn de verzekering van welvaart nu PeakOil, PeakCoal en PeakUranium voor steeds hogere energie prijzen gaat zorgen.
Solar panels zijn de verzekering tegen de oncombineerbaarheid van meer welvaart en afnemende en moeilijker winbare fossiele energiebronnen.

Prijzen zijn inclusief inverter(s) van 12DC naar 240AC, inclusief DC stroomkabels, inclusief aarding kabels, manuels, helpdesk en in euro's.
Prijzen zijn inclusief bevestigingsmateriaal (worden per order op basis van online ingevulde specificaties op maat gemaakt).
Prijzen zijn inclusief handleiding voor doe het zelf montage (de panelen zijn polycrystalline en 166x100x5 cm groot en wegen 20 kg).

Net aansluiting kost (afhankelijk van de grootte van de installatie) van E 150 tot E 1000 bij de lokale electro installatiebedrijven.
Huur van lichtgewicht aluminium bouwstelling om veilig te monteren kost circa E 100 en is mogelijk bij vrijwel alle lokale verhuurbedrijven.
PeakWatt naar kWh/jaar ratio efficiency in Nederland ligt tussen de 80% en 90%, er is dus een ratio van 85% average genomen.

Voor ondernemingen: via de Energie Investerings Aftrek (EIA) regeling geldt een belastingaftrek van 44% van de investering.
De EIA geeft bij eenmanszaak/vof 44% van de +/- 50% belastingdruk is 22% van het investeringsbedrag belastingvoordeel.
De EIA geeft bij bv/nv 44% van de +/- 25% belastingdruk is 11% van het investeringsbedrag belastingvoordeel.

Voor particulieren: indien de hypotheek nog depot ruimte heeft kan de installatie worden ondergebracht in de hypotheek.
PV is SDE subsidiabel, maar dat heeft meer het karakter van een loterij i.p.v. een serieus iets om rekening mee te houden.
Zonder subsidie en bij 85% pW output en bij kWh 2010:0,20, 2011:0,25, 2012:0,30, 2013:0,35, 2014:0,40, 2015:0,45 is de paybacktime 5 jaar.

Prijs van garantieverzekering optie is 3% per jaar, kan alleen in het eerste jaar na aanschaf worden afgesloten, garantiefees worden in een apart fonds gestort.
Door dit speciale fonds is de geboden garantie van daadwerkelijke waarde en niet een ongedekte louter op reclame teksten gebaseerde dekking zoals bij veel anderen.
Prijs van onderhoudsverzekering optie is 1% per jaar, kan alleen in het eerste jaar na aanschaf worden afgesloten, onderhoudsfees worden ook in een apart fonds gestort.

code	PV panels aantal	m2 per panel	m2 totaal	paneel pW	peakWatt totaal	kW/jaar ratio NL	opbrengst kW/jaar	DC/AC inverter(s)	montage materiaal	aarde kabels	DC kabels	manuels	helpdesk	pW prijs ex. btw	prijs ex. btw	pW prijs -22%ela	ez/vof -22%ela	pW prijs -11%ela	bv/nv -11%ela	pW prijs +19%btw	prive +19%btw
PV 01	8	1,66	13	240pW	1920	85%	1632	ja	ja	ja	ja	ja	ja	1,50	2880	1,17	2246	1,34	2563	1,79	3427
PV 02	12	1,66	20	240pW	2880	85%	2448	ja	ja	ja	ja	ja	ja	1,50	4320	1,17	3370	1,34	3845	1,79	5141
PV 03	18	1,66	30	240pW	4320	85%	3672	ja	ja	ja	ja	ja	ja	1,50	6480	1,17	5054	1,34	5767	1,79	7711
PV 04	24	1,66	40	240pW	5760	85%	4896	ja	ja	ja	ja	ja	ja	1,50	8640	1,17	6739	1,34	7690	1,79	10282
PV 05	32	1,66	53	240pW	7680	85%	6528	ja	ja	ja	ja	ja	ja	1,50	11520	1,17	8986	1,34	10253	1,79	13709
PV 06	40	1,66	66	240pW	9600	85%	8160	ja	ja	ja	ja	ja	ja	1,50	14400	1,17	11232	1,34	12816	1,79	17136
PV 07	60	1,66	100	240pW	14400	85%	12240	ja	ja	ja	ja	ja	ja	1,50	21600	1,17	16848	1,34	19224	1,79	25704
PV 08	80	1,66	133	240pW	19200	85%	16320	ja	ja	ja	ja	ja	ja	1,50	28800	1,17	22464	1,34	25632	1,79	34272
PV 09	100	1,66	166	240pW	24000	85%	20400	ja	ja	ja	ja	ja	ja	1,50	36000	1,17	28080	1,34	32040	1,79	42840
PV 10	150	1,66	249	240pW	36000	85%	30600	ja	ja	ja	ja	ja	ja	1,50	54000	1,17	42120	1,34	48060	1,79	64260
PV 11	200	1,66	332	240pW	48000	85%	40800	ja	ja	ja	ja	ja	ja	1,50	72000	1,17	56160	1,34	64080	1,79	85680
PV 12	300	1,66	498	240pW	72000	85%	61200	ja	ja	ja	ja	ja	ja	1,50	108000	1,17	84240	1,34	96120	1,79	128520
PV 13	500	1,66	830	240pW	120000	85%	102000	ja	ja	ja	ja	ja	ja	1,50	180000	1,17	140400	1,34	160200	1,79	214200
PV 14	750	1,66	1245	240pW	180000	85%	153000	ja	ja	ja	ja	ja	ja	1,50	270000	1,17	210600	1,34	240300	1,79	321300
PV 15	1000	1,66	1660	240pW	240000	85%	204000	ja	ja	ja	ja	ja	ja	1,50	360000	1,17	280800	1,34	320400	1,79	428400
PV 16	2000	1,66	3320	240pW	480000	85%	408000	ja	ja	ja	ja	ja	ja	1,50	720000	1,17	561600	1,34	640800	1,79	856800

Premier Bank

ECOSAVE

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solar@ecosave.com
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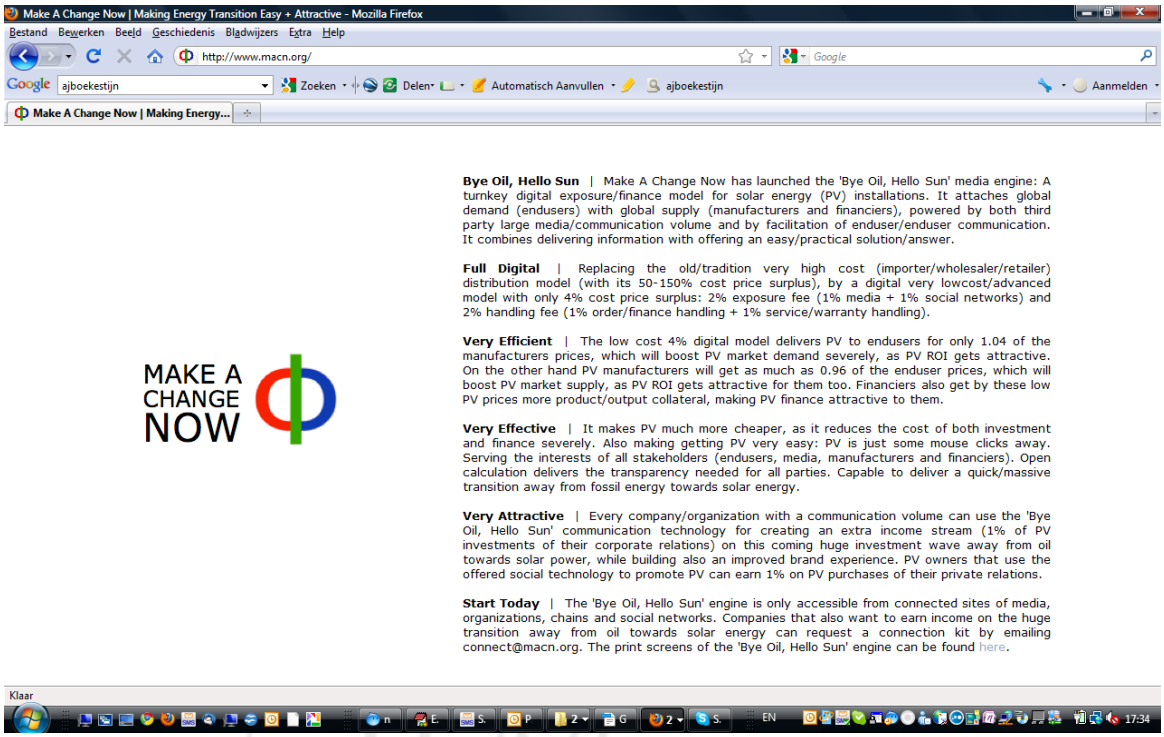
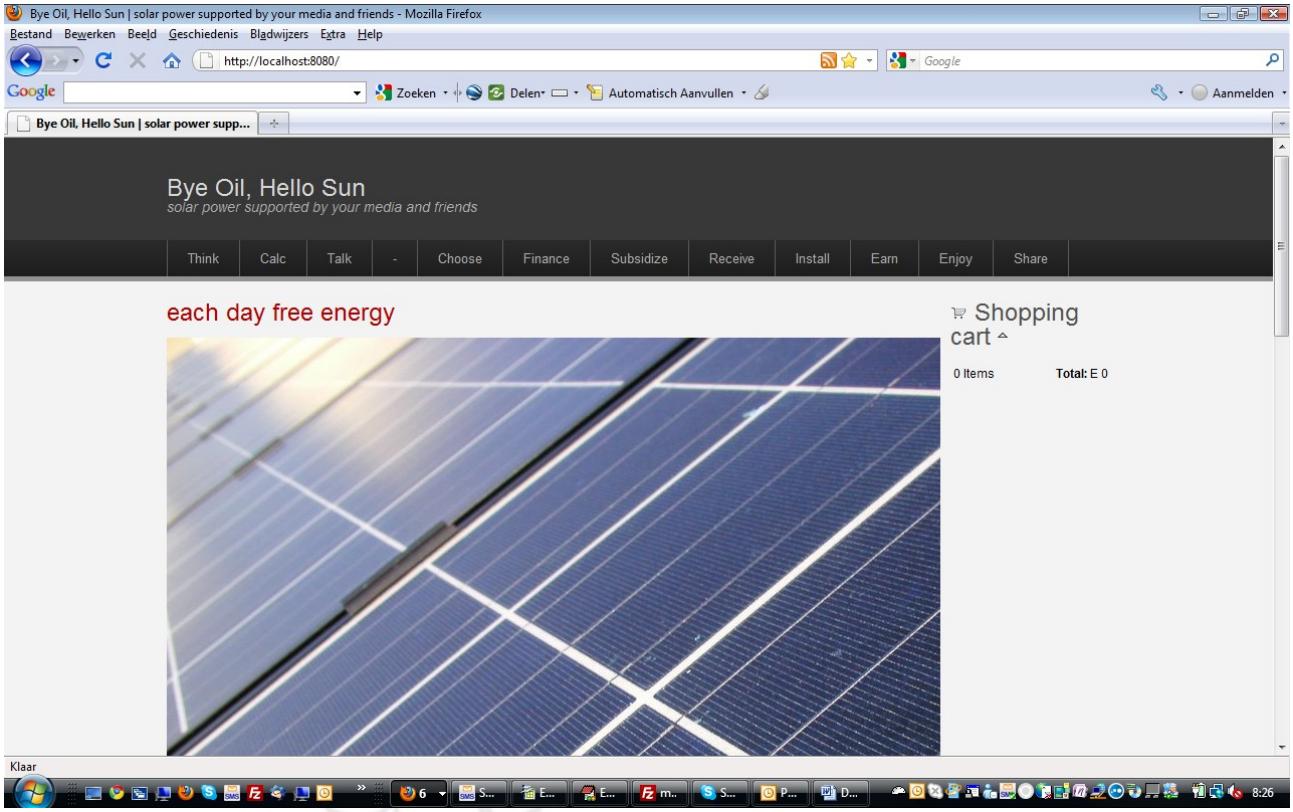
Energy Indus

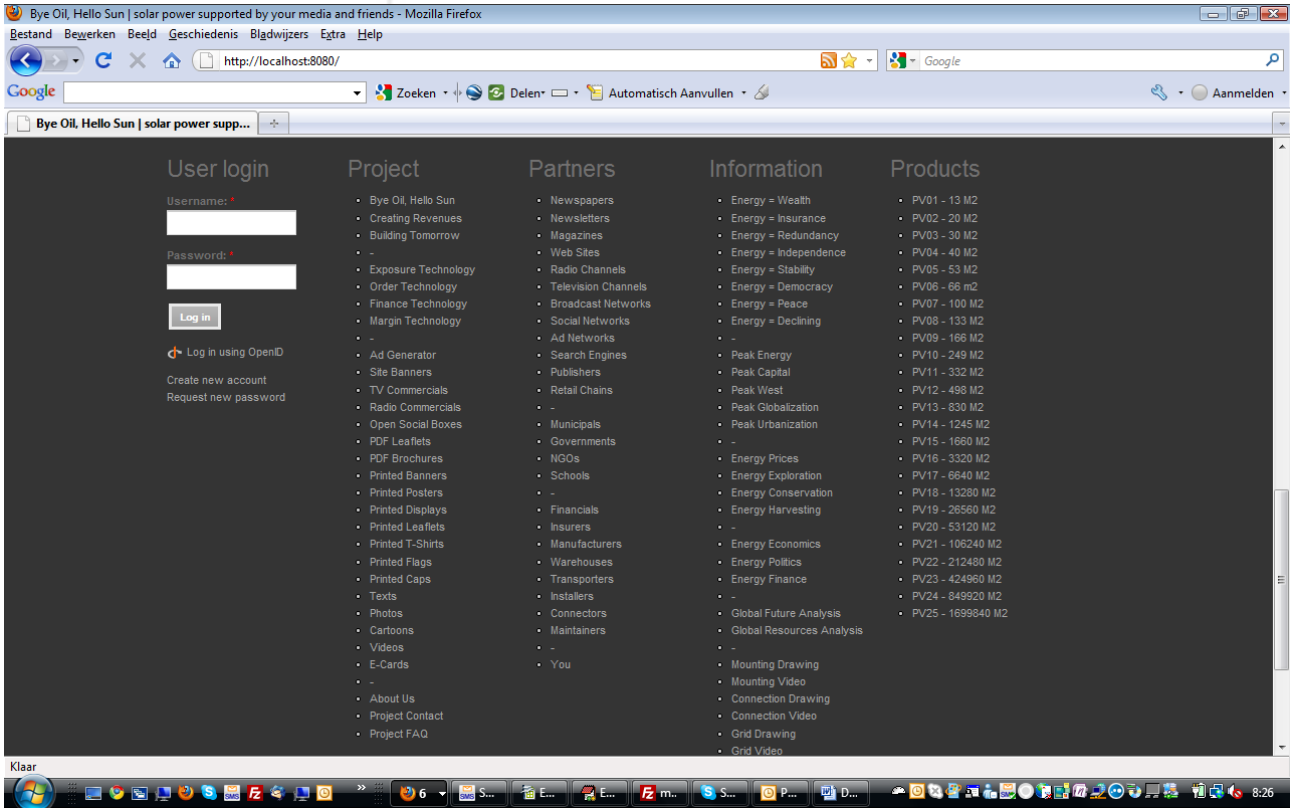
MAKE A CHANGE NOW



Finance model for transition away from hydro carbonates (oil/coal/gas) towards PV solar energy within 5 years.

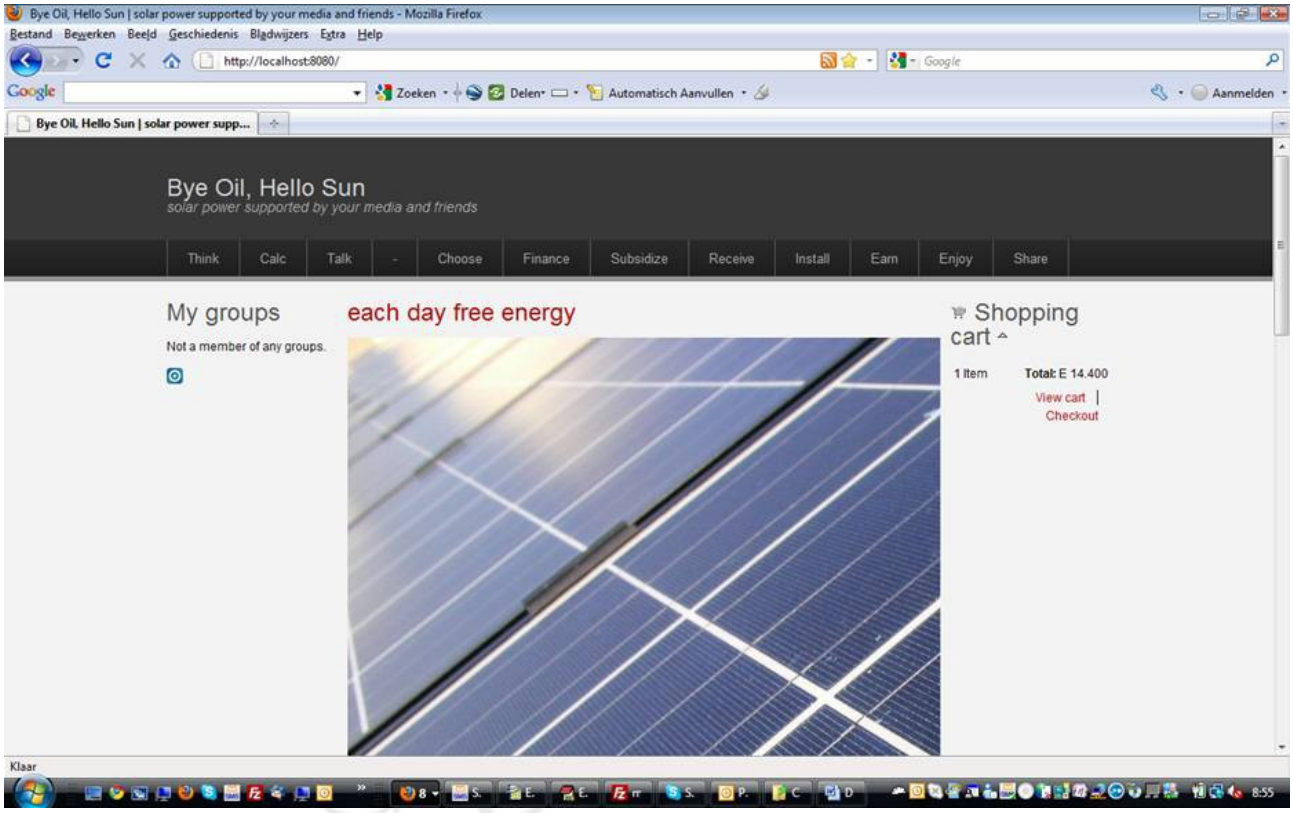
ENGINE SCREEN PRINTS (BEFORE LOGIN)

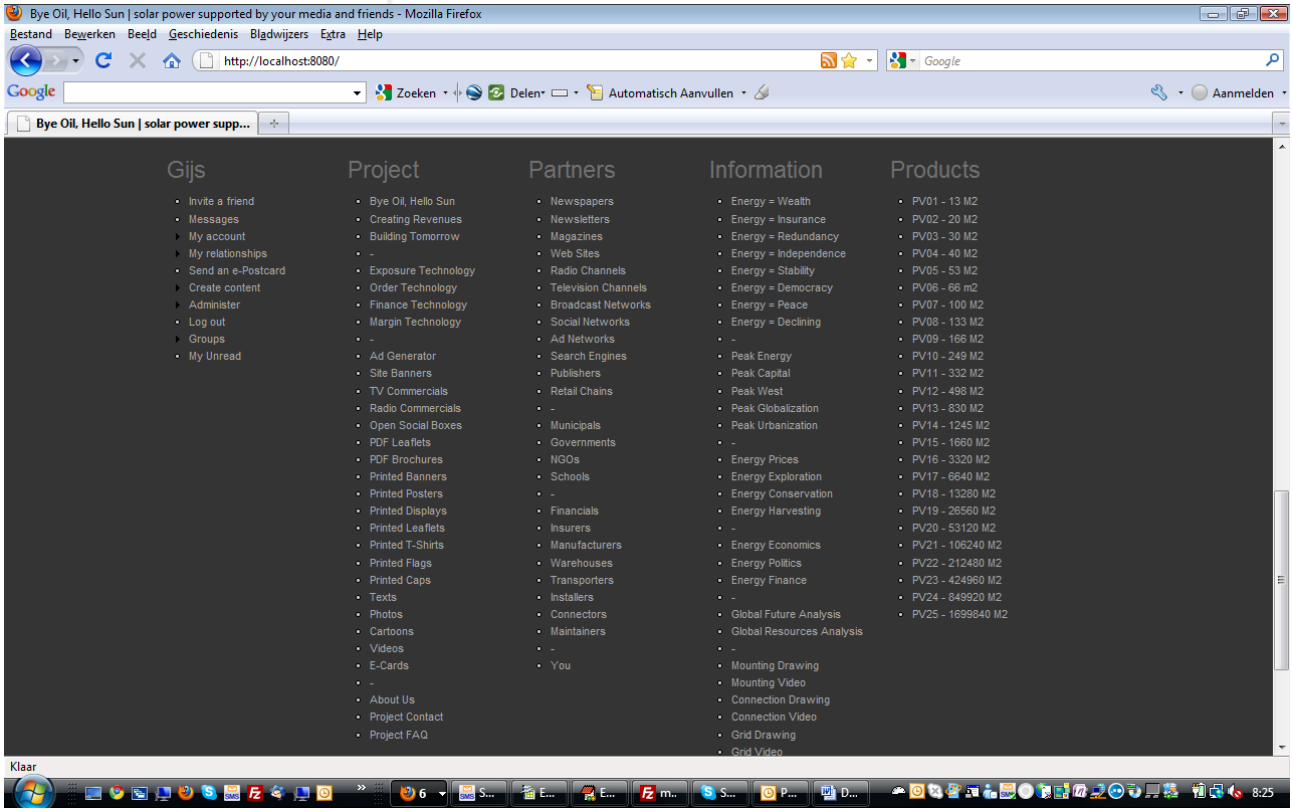




Finance model for transition away from hydro carbonates (oil/coal/gas) towards PV solar energy within 5 years.

ENGINE SCREEN PRINTS (AFTER LOGIN)





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EXAMPLE MEDIA AD

bye oil

hello sun

think

Forget the 'there's plenty of oil left' talk of lazy researchers. Yes, their is plenty oil (deep sea or arctic sea) out there.
What they don' tell you is that the costs of exploration/refining of this oil will be multiple higher than you're used to.
Reason? We've used the easy to find easy to refine oil. What's left is the expensive to explore or refine oil.
Add to this picture the increasing energy demand and purchase power of the economic emerging nations.
The days of cheap and abundant oil are over: Less supply, higher costs and more demand: prices will go up.
On top of this: energy imports equals wealth export (energy imports drain each western economy).
That fossil energy the main cause behind global tensions/conflicts is, is no rocket science to anyone.
You pay indirect the costs of these conflicts by your energy price and by the rise of the defense budget.
Oil has brought us prosperity. But oil starts to become a burden. Time to say good bye to oil we think.
Don't you agree we should transite our energy system to the sustainable prosperity direction?

choose

Changes are hard. This is why they get difficult some serious traction and burns a lot of time/effort in acceleration
New things should be easy. No tech bla bla. You just wants energy, nothing less and certainly nothing more.
What you think about this: Just measure your roof and and you're ready. Does that sound attractive to you?
Finance should be easy and fair. Fair is just another word for transparent and open.
We thought you need some help here. So we developed an open finance platform.
Financials just can see anonymousness (only area code visual) finance requests. They can't even email you.
You just can see their very transparent -even standardized in terms- quotations regarding interest rate.
So finance by just clicking a check-box on a form is possible. Does that sound attractive to you?

install

Installation of the solar modules on your roof is just as easy as easy as turning some bolts and some plugs.
As you already has measured your roof, we make a customized mounting solution.
The final connection to the grid must be done a your local installation company. Let the pro's do that job.
But the basic module installation? Everybody can do it. Even you.

earn

You know the price of your energy. Not only now. But for the next years.
No pollution by you, no wealth drain caused by fossil energy for you, no global tensions/conflicts for you.
Like your own power generation/harvesting? No problem. Others will too. Just show them your installation.
Making world peace and reducing pollution is as easy as serving them some user information.
Ordered and installed your solar panels? Earn some by inviting others to do so too.
Just use our tools. You get 1% of their order as payment on your finance.
Not bad we think. For example 10 times 1% is a solid 10% in your pocket.
You'll like it for sure.

www.medianame.com/hellosun

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Planck Foundation

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Gijs Graafland

Amsterdam Holland

2007 – 2008 – 2009 – 2010 - 2011

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