

Energy Indus

Energy Indus (EI) is a global service partner positioned between the energy industry and the financial industry, serving economies and governments in their future energy demand policies and actions. Delivering financial engineering and consultancy that provides a higher sustainability energy feed into economies.

Energy equals prosperity. Energy is the main and totally taken for granted i.e. forgotten drive behind the industrial, agricultural and information revolution of the 19th and 20th century. Conventional energy resources are at the end of their growth, now stabilized in supply, but soon will go in decline. Sustainable wealth requires a sustainable energy feed. Sometimes the theory is very easy to understand. Those three very basic facets defines the future energy situation and its effects very clear.

EI is mainly focused on the capital facet in sustainable (equals: clean and renewable) and national/local produced energy. EI is about financial engineering for realizing clean sustainable energy production. Concentrated in just one line: EI is about the \$ in kWh generation.

Financial engineering is about making more sustainable energy generation (equals: future prosperity) possible by developing and/or upgrading and trading advanced capital/finance business cases in energy generation. EI is not providing the capital as financier, but realizing business cases that are interesting for the global capital players. EI is about the finance facet in energy generation.

EI operates as a full service provider in the area of energy focused financial engineering for the financial industry worldwide, the energy industry worldwide and governments. EI operates 12 specialized business units: Investment Cases, Guarantee Funds, Market Tendering, Project Engineering, Product Technology, Bank Consultancy, Asset Consultancy, Monetary Consultancy, Government Consultancy, Energy Awareness, Demand Concentration and one internally focused business unit (board, auditing, IT, mathematics and marketing).

Energy = Wealth. Expensive Energy = Less Wealth. Cheap Energy = More Wealth. More people on earth with more purchase power, leads with mathematical certainty to more demand, and if the supply no longer can keep up with the demand (PeakOil/PeakCoal/PeakUranium), the energy prices goes up and up, till it slowed down the demand to supply levels.

EI is nor part of the green movement, nor part of climate movement. EI is purely motivated by its drive of maximization the sustainable (equals: renewable) national generated energy feed into economies globally against lowest prices in the best investment cases. EI is just about energy. EI = kWh = Future Wealth. EI is just about wealth. kWh = Wealth.

EI addresses the PeakEnergy issue directly. People, companies, banks, officials and governments not familiar with the PeakEnergy issue (PeakOil/PeakCoal/PeakUranium) concerning future energy supply and price problems, better don't read this EI Introduction Paper. They'll not understand nor the problem, nor the offered solutions.

PeakEnergy is about increasing global energy demand and declining global energy supply, which will push the price levels of all types of energy sources to the roof in the next decade. Therefore any investment case based on historical energy prices is irrelevant and even close to stupid: it doesn't take in account that the times of cheap and abundant energy are behind us. The 20th century is passed away, the reality of the 21st century is no longer abundant energy, by increasing global demand from out of the emerging markets. The reality of the 21st century is expensive energy.

The most forgotten economic fact in the economic science is the fact that there is a direct relation between the availability and price of energy and general/wide/national/global prosperity. When energy fades away or gets too expensive economies slow severely down. When energy feeds stop, economies will collapse the same day. Energy feed is as important as other major issues, like water feed, good government, legal structures, etc. Without energy everything will stand still (collapse). With expensive energy everything slows down (recession). Smart economies reduce their energy demands as much as possible, and maintaining by this energy efficiency their prosperity. Not smart economies stay energy intensive and will go in decline (like the US economy has done) due to energy waste.

EI addresses also the PeakCredit issue. The very much forgotten underlying cause of the Credit Crunch the significant sharp rise of energy prices. This due global demand rise in combination with global supply plateauing. These two reversed market developments results everywhere anything with mathematical certainty in severe higher market prices. Of course there was also artificial too long postponed conjuncture influences, structural system design failures (system legislation), severe exploitation of these build-in exploits (system abuse) and weak supervision by the by legislation empowered institutes (weak control), and the role of strong global competitors in the emerging markets, but higher energy prices has brought these facets to the surface. Banks suffering from the major effects of PeakCredit will get income and time to adjust to the new realities by the EI models.

The western world currently faces PeakEnergy, PeakCredit, PostGlobalization and strong emerging nations (which depend each year less on the western world for knowledge based products) the same time. Which all together makes the PeakWealth in the past them. Economic growth is no longer a valid option, maintaining prosperity will become the most attractive scenario.

The western world should stop exporting wealth by importing fossil energy. The western world should start manufacturing again, knowledge is no longer their USP. The western world should increase productivity by digitalization very fast (digital desktop technology, video based calling/meeting) to keep up with the wealth 'eating' influence of rising energy prices.

Only in the western world are PeakEnergy and PeakCredit directly related. In the emerging world PeakCredit is somewhere in the future: in these nations fractional reserves based banking will be operational till they also reach their PeakWealth level. Increasing energy prices are the real reason behind no longer working fractional reserves based banking in the western world and thereby behind the increasing bank equity demands in the western world: fractional reserves based banking only works in growing economies, as the money for interest payments by fractional reserves based banking only is created by economic growth. Any economist with monetary knowledge can confirm this total forgotten fact, that our current banking model doesn't work if growth is absent.

This build-in 'need for growth' due to the current banking model is the main reason behind the push for credit explosion of the last decade by Central Banks in the western world: The western world has postponed economic decline by huge credit increasing as long as the financial system would let them do it, till it reaches the end of its growth in 2007 and thereby collapsed. The current recession is not only a conjectural one, but also a multi structural one: more people on earth, more wealth on earth, more energy/resources demand on earth are new structural facts. Combine this with the new structural fact of declining energy feeds, which leads to expensive energy (which of course hits energy intensive economies the most) and with new strong players on the world market in both supply (= knowledge, capital, production, etc) and demand (= purchase power), taking over the western world time in the global economic sun. The time of cheap energy/resources is behind us. Definitely, structural. The 21st century has a new reality (and thereby economic change) for us.

National energy generation is the best way to insure that an economy will produce prosperity. Stopping exporting wealth by stopping importing fossil energy gives a structural prosperity increasing influence on any economy. EI is therefore also about lowering global tensions over energy sources. It's safe to say that the military expenses can be added to the cost/burden of energy on economies. This is not a left wing statement, but a pro prosperity statement.

Energy independence insures prosperity. Energy investments generates/insures future prosperity very directly. EI is born and will be raised within Planck Foundation (www.planck.org). The reports of Planck Foundation can be found there, as well some of the received testimonials. EI will be supported by Open Foundation (www.openfoun.org). Open Foundation wants to go live with the Open Science, Open Technology, Open Education, Open Content, Open Government, Open Finance, Open Business and Open Action platforms that are crucial parts in for starting a massive energy transition investment wave in 2010.

INVESTMENT CASES All over the world there are renewable and/or clean tech fossil investment cases: existing, in progress, in planning or as opportunity. The acquired cases will be (re)designed, upgraded and/or traded. Though financial engineering the investment cases will be enriched by commercial and/or governmental guarantees/insurances, CDSs (Credit Default Swaps), distributor/enduser commitments and insured currency carry trades (reducing interest rates). Through this financial engineering, cases will become as attractive as possible for global financial institutions and their funds, or for initiating case IPOs, creating an attractive spread between case purchase and case sales for EI. The global financial institutions search for alternative long term investments in assets which value will increase (due to PeakOil/PeakCoal/PeakUranium which will lead to severe high energy prices) and not decline (like governmental bonds and real estate), energy is certainly a very attractive (more value increasing) alternative. Though financial engineering the investment cases also will be made investment currency independent as the return can be paid out in kWh. This makes energy a competitor for the value insuring function of gold as safe harbor as now these days is practiced the financial industry. The lowest CAPEX and OPEX, in relation to maximal multi layer guarantees and maximum energy output, will be the result of financial engineering. Creating the best ROI possible. Financial engineering leads to the most attractive as possible investment cases.

GUARANTEE FUNDS The by the sale of the macro investment cases made profit spreads can be invested in the nations that have issued the guarantees that have issued the guarantees (and by this made the trade possible). Though creating an equity guarantee fund for wide voluminous decentral micro energy loans by regular banks and fill such funds with the trade profit of the investment cases. By this investment trade profit use in guarantee funds for micro energy investments, nations gets a triple effect on their state guarantees. Though this system huge macro energy investments are realized and create after sale of the investment case by its profits national equity guarantees for wide voluminous micro energy investments and it gives the banks substantial risk-less turnover. This model has a huge and positive impact on the health of the banks in these nations. EI has made available a diagram for external use on the site of Planck Foundation (www.planck.org) that visualizes this 'macro enables also micro' model much more in detail, the functional simplified and extended diagrams can be downloaded at <http://www.planck.org/financeplatform/functionaldiagram>.

MARKET TENDERING Large macro investments needs a lot of products, transport, installation work, insurance and finance. As trade has become much more transparent as it is increasingly digital, is specification based market tendering a very ROI improving solution. Any transaction component in energy investment is about specifications and performance guarantees attached to a price and (sometimes) a purchase financing and/or insurance proposal. As large projects in renewable energy are mainly a concentration of components, a specifications, guarantees combined with price, finance and insurance based market place give manufacturers that offer those efficiently and with quality an easy to realize head start on less comparative competitors. A good market place lets the best ones win and is an insurance against bribery. A good market place significantly increases the quality of initial specifications and year after year performance of products. Lower investment prices, better specifications and better performance guarantees make the investment cases much more attractive. Manufacturers can ask their governments for finance support and performance/warranty insurance for getting parts of those large installation orders. Contractors can ask their governments for finance support and performance/warranty insurance for getting the overall realization order of large projects. An overall contractor insures the full project realization within offered time, based on the by market tendering acquired best specifications. All these by market tendering delivered better specifications, performance guarantees, finances deals are part of the overall financial engineering to make investment cases attractive to financial institutions. Market places reduce both CAPEX (investment amounts) and OPEX (operational costs), both direct and indirect. Market tendering also will play a roll not only in building/upgrading investment cases, but also in selling them (the same game, only than the other way around). Finally, market tendering will play a role in connecting renewable energy consumers/distributors to producers: nationally and internationally.

PROJECT ENGINEERING Large projects need proficient project engineering. Project engineering generally consists of two major facets: design and auditing. A separate auditing unit besides the design unit considerably improves the quality of each project. Controls, if implemented with the appropriated principles and management practices, can improve quality significant. Good project engineering i.e., both design and auditing, produces solid investment cases: leads to lower costs, less operational risks and more ROI. Good project engineering (so both design and auditing) makes good investment cases. Project engineering is supported by the mathematics unit of the internal focused business unit of EI, above.

PRODUCT TECHNOLOGY Product production costs, product specifications, product maintenance demand and product performance lifetime are the important facets in both product investment as product ROI (Return on Investment). Good product technology will lower both CAPEX and OPEX and make investing both easier (less capital) as well more attractive (higher ROI). EI not only stimulate open (free use by manufacturers) energy technology, but also will play an active role in this through its Open Foundation initiative. Better specs, better quality, lower prices (better/smarter production and no IPR -Intellectual Property Rights- costs), better qualities are the 3 key results of the Open Technology concept in energy related products. Supporting Open Technology yields a significant greater ROI on each dollar than each entity conducting its own research.

BANK CONSULTANCY Banks are operating in severe hard conditions the last 2 years. Declining asset values combined with increasing equity demands, in a declining economy environment. The current banking model of fractional reserves based banking (i.e. operating with less than 100% equity) get exposed mathematically to customer payment defaults as an economy no longer grows (or even declines). This because when a loan is made, the money for the loan is created, but the money for the interest is not created, that must be created by economic growth. So when economic growth is absent, automatically and with mathematical certainty a certain percentage of the bank customers will default on their loans. Bank Consultancy delivers a national financial sector plan or specific bank plan for energy transition investments, that delivers full digital (low costs) demand for (mostly state guaranteed) energy transition investments. Consumer credit makes bank consumers less wealthier in the future. Energy investment makes bank customers richer in the future. Energy investment finance has a positive effect on the outlook of a bank and by this the rating of a bank. Good ratings increase the possibilities for banks to realize both good turnover and good margins.

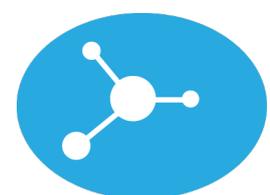
ASSET CONSULTANCY The major stakeholders in the global capital market (Pension Funds, Sovereign Wealth Funds, Hedge Funds and Long Term Capital Funds) are searching their way out of monetary decline of their assets. The current economic turmoil has led to large monetary Quantitative Easing (printing money), large (in many cases too large) Governmental Debts (massive issuing of State Bonds i.e. Treasury Bills) and large value decline on almost all other assets by both economic slow down and even completely defaulting assets. All these value declines confront the Pension Funds with a complex and difficult situation: They have to index their product specs against monetary decline, otherwise nobody will use their services. But the value of their assets are severely washed out i.e. Wiped away by the same monetary and economic decline. This in a homeland environment with economies that are slowed down severely by both recession and high energy prices, and profiting of stronger foreign emerging economies is not possible due the capital de-globalization trend, as distance and risks has proven to grow close to each other. Capital stays closer to home due the experienced huge losses of foreign investments. Asset Consultancy assists the Pension Funds and Sovereign Wealth Funds in dealing with all these influences and define an energy investment policy for them. As energy investments offer free build-in insurance to monetary and economic decline, by providing kWh defined output instead of currency defined output. Energy investments are better than gold investments in this currency decline hedging goal, as gold doesn't produce anything and energy investments really deliver each day economic tradeable output in kWh. Asset Consultancy designs assets value increasing investment plans for Pension Funds and Sovereign Wealth Funds that perform even in beyond the current economic, monetary and governmental turmoil.

MONETARY CONSULTANCY Central Banks are completely independent of the governments of the nation(s) they serve. This has historical roots: Before the currencies were in the hands of the Central Banks, they were in the hands of the governments, and some governments did not very cleverly do things with their issued currency (mostly they bankrupted a currency by conducting expensive wars, by watering the value of currency, by issuing too much debts related to the economic performance). But the pressure on Central Banks is getting harder and harder. Nowadays the Central Banks must correct their weak regulation (since the deregulation of 1998) by saving banks. Nowadays the Central Banks must do interventions in the bond market: buying Governmental Bonds (otherwise the treasuries will get dry, lack of declining foreign interest in purchasing governmental debt) and Corporate Bonds (as otherwise the banks will get illiquid) in large quantities. Nowadays the Central Banks even much do interventions on the stock market (as a collapse of the stock market will wipe even more assets away). Nowadays the Central Banks even have to intervene in the mortgage market by buying to heavy CDOs of the back of the (semi-governmental) mortgage banks. By this all the Central Banks searching for a way out of all this their currencies declining activities. Monetary Consultancy advises Central Banks in stopping Quantitative Easing as tool for covering the losses of the past, and in using Quantitative Easing only as tool for energy investments. As this is the only way out of the current monetary situation that make a currency stronger instead of weaker, as future energy supply is something that supports the future economic health very much. As it produces a solid value (energy) in the future and secondly as the energy prices in the future will be significantly higher than today due to PeakOil/PeakCoal/PeakUranium. Monetary Consultancy supports Central Banks in this changing process by delivering them ready to use models and technology for implementation of only energy investments based Quantitative Easing.

GOVERNMENT CONSULTANCY Since energy equals prosperity, all governments are looking for energy supply diversity as part of their future wealth insurance strategy. EI offers governments practical 'starting tomorrow' solutions for realizing both energy diversity as maximizing of economic renewable sustainable energy feed in to their economies. Governmental Consultancy offers Ministerial Advices, Finance Models, Communication Models, Demand Concentration, Project Engineering, Industry Transition, Capital Input and Guarantee Multiplexing. For testimonials of many governmental officials see the site of Planck Foundation (www.planck.org), for a wider concept description of energy transition to sustainable sources and economic stimulation see the site of Open Foundation (www.openfoun.org).

ENERGY AWARENESS Crucial for energy transition from fossil to renewable is energy future awareness. Not any ideology, but just the market mechanism between supply and demand needs more exposure. More people on earth, poor nations with large inhabitant numbers become emerging markets, more wealth, more purchase power, more energy demand. Energy that for 90% has a fossil origin. Future energy which supply of existing fields declines with a 5 to 14 per cent rate each year. Future energy that must come out of expensive new (deep water) fields with a severe higher cost price than the cheap and abundant oil/gas/coal of the past. As energy equals prosperity, future energy prices will repress prosperity severely. Also the wealth exporting facet of importing fossil energy must be emphasized: the wealth drain of fossil imports has lower awareness than its severe structural economic impact. Investing in energy is investing in future prosperity. Investing in renewable energy is investing in own economy instead of other economies. The Energy Awareness unit has ready to use plans for financials and governments to stimulate the 'looking to the importance of energy' issue and the 'looking to the future price of energy' issue. Awareness about these two issues is a good and realistic economic foundation for massive energy transition investments. Not making the economic misconception that the past abundant and cheap energy situation is the right mathematic model to plan future energy prices (= prosperity levels). Investing in energy generation is creating future prosperity.

DEMAND CONCENTRATION One of the much power financial engineering tools is end user demand concentration. It delivers both market volume and cost reductions the same time. The future purchase/payment power of the end users is the foundation of almost each energy business case. The financial basics of energy investments are not that different of real estate. EI has developed a large global end user renewal energy demand concentration model. Which will be roll-out in each nation that request us to run this model for them. This demand concentration model can be attached to a financial model and can be open to any qualified manufacturer, financial institution, bank, credit union, pension fund and installation company.



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