

ENVIRONMENT, ENERGY SOVEREIGNTY AND EMPLOYMENT NOW!

1. INTRODUCTION

Over recent decades, the energy sector has witnessed an unstoppable convergence of costs between the old, dirty and dangerous fossil and nuclear fuel model and the renewable energy model, which is intrinsically clean. The former has become more and more expensive, both in terms of direct costs such as increasingly less accessible sources and the need for greater investment in security, and indirect costs such as pollution, climate change, geo-strategic tensions and armed conflicts. While the latter, thanks to economies of scale, constantly improving production systems and being based on free solar energy, have seen costs fall, and in many cases almost in geometric progression¹.

We find ourselves therefore in a very different reality to that of recent years and that perceived by public opinion in terms of energy issues. Then, it was said that clean energy was “the desired option” but was not viable due to high costs, a stereotype that has been disproved. A truer affirmation nowadays would be that it is precisely the wasteful and polluting energy model that is not viable.

The priority for the New Energy Model (NEM) is to change the perception held by many members of the public about our current energy system. For the public to be aware of, among other things, why electricity rates have increased almost 80% since 2004, impoverishing domestic consumers and endangering the survival of many companies. Only with an informed and critical public opinion is it possible to break the steel bonds of government and the big power companies, whose huge profits and power depend on a centralized and polluting model based on maximizing the dependence of the public and the people. We must convince governments that an alliance with the public and the environment benefits them more, that sustainability is intrinsically linked to the common good and not to the interests of a minority beyond all democratic controls.

2. WHAT IS THE NEW ENERGY MODEL (NEM)?

The new energy model rests on four pillars:

- **Savings:** There is no better management of energy than that which seeks to eliminate all unnecessary consumption. In the NEM not consuming a kW hour should be the first option, without a doubt ahead of the use of clean and renewable energy. From the Building Code (Código Técnico de la Edificación) to residential rehabilitation programs, through plans for the transport of people and goods, people’s needs and the working of the economy should be built from the perspective of fighting energy waste, that is, using energy savings and efficiency standards².
- **Renewables:** Renewable technologies are those that use indigenous energy commodities that regenerate and do not emit contaminants into the atmosphere (or do so minimally or neutrally). These

¹ A solar panel cost €810 in 2008, currently, only four years later, it costs €150.

² The example of the resistance of the central government to the incorporation of the Savings Directives that come from Europe, directives which make complete sense ecologically and economically, into our legislation demonstrates just how powerful the non-democratic powers are.

ways of getting energy must displace dirty and dangerous technologies as soon as possible, but in a planned way (in accordance with environmental, economic and social standards). The introduction of these technologies must be a gradual, but growing, in order to take maximum advantage from the learning curve and, in this way, increase the investment in new clean power generation plants when the costs are lowest, and as conventional power plants are being dismantled in an orderly fashion.

- **Efficiency:** As a necessary complement to energy savings and the spread of renewables we must move toward a model that uses only that energy which is absolutely necessary to maximum advantage. This does not have to mean a lessening of the well-being of consumers, but rather a small readjustment in consumption habits and the deployment of devices and complementary technologies which automatically optimize the best possible use of energy at every moment. This new paradigm points not only toward intelligent networks³, but also to the defining of dynamic price structures or resorting to storage systems to manage peak demand.
- **Sovereignty:** The majority of renewable technologies permit a decentralized distribution. As a result it would be an error to replicate the current centralized, oligopolistic energy system with renewables. This means favouring, to the extent possible, individual sovereignty through self-supply (using photovoltaic and thermal solar panels, biofuel boilers, geothermal systems, mini-wind turbines, etc.), as well as a preference for medium-sized renewable energy plants tied to local consumption. From an energy standpoint, this means returning to people a measure of control over their lives.

Sovereignty also means education and information, as well as democratic decision-making about which energy model to choose in the local and regional sphere. Likewise sovereignty also means energy independence. Taking advantage of the ubiquitous renewable energy resources frees people from their current subjugation to those few who possess nuclear and fossil fuel resources, even as these are on the verge of running out (peak oil).

3. WHY DO WE NEED TO CHANGE OUR ENERGY MODEL?

The urgent need to change our current energy model, as well as the magnificent opportunity it represents, are summarized in the following points:

- **A new environmental paradigm:** The transition toward an NEM constitutes the first step toward having the workings of economy and society develop in harmony with workings of the environment. The environment comes first, even if only because the earth we inhabit is not going to wait for us to agree on how to make our material progress compatible with the fragile equilibria of the biosphere. The NEM is not a panacea for all environmental problems, but it *stanches the bleeding from what is now the planet's most significant wound*.

We also have to honour the commitments undertaken in the European arena regarding the reduction of greenhouse gasses under the Kyoto Protocol. Climate change is already a reality, as demonstrated by the series of extreme climate phenomena that have been happening ever faster in recent years.

³ Over which flows not only electricity but information as well, like an internet of energy which allows its best possible utilization.

The NEM constitutes the best means for complying with the international agreements we have endorsed, as well as (and this is truly important) accepting our responsibility for the planet⁴.

- Macroeconomic imbalances: Many of the problems that our economy suffers come from our heavy dependence on fossil fuels (one of the greatest in Europe).

Balance of payments and financial dependence: In the first place there is a direct relationship between this dependence and our current enormous financial difficulties. The reason that international lenders resist renewing the loans that are coming due is because we have a high foreign debt (we owe them a lot already). This enormous net foreign indebtedness (more than a billion euros) is due, in large part, to the immense deficit⁵ of our energy balance: every year we accumulate an enormous and growing energy balance – one that has gone from some 20 billion to more than 40 billion euros, whereas our balance of payments deficit has been falling in recent years and currently amounts to some 32 billion euros (in 2011, which will be even less in 2012). That is to say that if we had complete energy independence, we would have a foreign payments surplus and not a deficit. We would be the ones lending and not the reverse, in which case our risk premium and financial difficulties as a country would be much less⁶.

In addition, if we reduced our CO2 emissions significantly, we would also be reducing an unnecessary cost that forces us to buy rights from other countries and thus increase our balance of payments deficit.

Inflation: Likewise, the main reason that our economy is incapable of keeping prices under control is that we import inflation with the price of oil. Even in times of deep and prolonged economic crisis such as now, the price of a barrel of oil has caught us unawares with historic highs in terms of euros. We are

⁴ All of which is contained in the Earth Charter, essential reading for an enlightened and responsible citizenry: http://www.earthcharterinaction.org/invent/images/uploads/echarter_english.pdf

⁵ At times it can be hard to know what type of deficit is being talked about in every instance. One must distinguish between:

- The balance of payments deficit refers to our economic relations with other countries. We are in a deficit situation when more money leaves the country than enters. One of the components of the balance of payments is the energy balance: for example, money flows out to oil exporting countries and enters through the sale of electricity to Portugal. The deficit that has been generated in recent years is the one that accounts for this accumulated foreign debt of a billion euros.
- The public deficit comes from the comparison of the revenues and expenditures of the government. When that which is collected through taxes is less than public sector expenditures, we have a deficit situation.
- Last, the electric rate deficit is specifically a problem of the electric power system. It is produced when the monies the electric power companies collect are less than the costs allowed by regulations in force at the time. This creates a debt that consumers owe the electric power companies.

⁶ Of course the risk premium, that is, the higher interest we must pay on our public debt compared to Germany, is directly related to the public deficit (because if the government continues increasing its debt, international lenders begin to doubt its ability to repay all that is owed), and the fragility of our financial position is increased by the need to go outside to borrow. Japanese public debt is infinitely greater than ours and yet the interest its government has to pay is one of the lowest in the world for the simple reason that it is the Japanese themselves who buy that public debt.

not going to lower our export prices no matter how much we slash workers' salaries as long as the financing costs and the price of energy continue to shoot up.

With an NEM we also trade the volatility associated with fuel for the stability which only the sun can give us. The imminent problems deriving from the scarcity of energy commodities will be bypassed if we opt for clean energy sources whose prices can fall from here forward.

- Economic activity and employment: Renewables, construction techniques and the installation of energy-saving and intelligent energy use devices promise to be immense sources of jobs, in installation as well as operation and maintenance. A decentralized energy system based on renewables is much more labour intensive (and more demanding of skilled labour) than the current centralized model.

At a time like this, in which our country urgently needs to change its economic and production model, it is suicidal to throw overboard a high value-added manufacturing sector like the renewable and energy efficiency sector in which we have been at the forefront internationally.

The development of renewables will inevitably parallel the decline of conventional energy. As a result public measures must be adopted to protect employment and retrain workers from conventional installations (perhaps to direct them toward new jobs associated with clean energy) and to reactivate effectively the economies of the areas affected by the changes.

- Energy supply independence and security: Renewable energies are, taken together, ubiquitous. All places have either wind, sun, geothermal gradients, biomasses, river courses or wave action. However, conventional energy commodities are very localized in specific countries, many of which are also unstable politically (in large measure as a result of relying on those resources). Moving to the NEM means giving more just and less conflict-ridden world governance a chance.

At the local or even personal level, the NEM means empowerment over a need as basic and important as energy.

4. WHY IS THE TRANSITION TO THE NEM POSSIBLE?

The reasons noted in the preceding section, in and of themselves, would explain the need for a change in our energy model. Nevertheless, it turns out that many of the renewable technologies are already competitive in price, even before taking into account a single one of the indirect benefits cited. And the same can be said of many of the intelligent energy use and energy-savings measures, whose investment is recovered in the space of only a few years of their useful lives. So moving to the NEM makes sense in and of itself, and it makes ever more sense thanks to the economies that result from its development.

But in order for the transition to be successful, for it to be achieved with the urgency imposed on us by the ever continuing deterioration of the environment and the growing social divide, it is absolutely essential to redesign the energy system around a clean and sustainable model. We must abandon the politically correct discourse that says that all technologies are needed in the mix, even for the long term, in order to state emphatically and with no turning back that we are heading toward a model in which there is only room for

energy savings and renewables, and that it is necessary to introduce all the changes that the system needs in order to implement the NEM in the most efficient way possible.

Similarly there will be no NEM, or it will come about too late, without decisive action to place energy topics in the place they belong in the social debate. Economic arguments take time to have an effect when one must struggle against powerful prevailing ideas.

More specifically, what will be needed, among other things, are:

- Selecting judiciously the best available technologies for each site
- Adapting energy policy to allow the orderly development of all renewable energy sources
- Using complementary technologies that allow the management of the intermittency of some renewable energy sources
- Taking advantage of future savings in order to implement efficient storage systems
- Turning toward the increased use of electricity, particularly in transport, in a way consistent with the development of renewables
- Creating sustainable passenger transport plans that guarantee access to goods and services with a sharp reduction in transport, promoting local commerce and trade over short distances, both of which will boost local employment
- Highlighting the value of rural areas as a source of energy resources as well as agriculture and stock-raising

5. ACTION PROPOSALS

A transformation of the energy system as profound as the one proposed here requires the political impetus of the Spanish government. Its role is to lead initiatives that would make up the backbone of a true state policy in energy matters. Specifically:

Group 1: Thorough reform of the energy sector

Although it is true that electricity is not the entire world of energy (It represents only 37 per cent of the primary energy consumption⁷), we believe that it is completely justified to start with it in this section dedicated to action proposals for two reasons:

- Firstly, because the electric power system has become a real political bottleneck as far as changing the energy model is concerned. Currently, in any debate about energy, the electric rate deficit is placed ahead of any other consideration. It appears that in recent years it has been building up to the point

⁷ http://www.asociacion3e.org/img/11a3e_1302779849_a.pdf. Page 3

that it has reached a total of more than 20 billion euros – and that in spite of the fact that consumers currently pay one of the highest prices on the continent for electricity. As a consequence any alternative to the present energy system is always going to run into the unresolved matter of the rate deficit.

- Secondly, because of the transformational power that electrical technology has relative to reaching the objective of a sustainable and efficient energy model. It is through electricity that renewables are being integrated into modern energy systems. And when the introduction of the intelligent and efficient use of energy is discussed, one thinks mainly of the electrical part of the energy mix and that electric power lines carry not only energy, but information as well.

Consequently, offering a well-reasoned and reasonable solution to the problem of the rate deficit and the price of electricity in our country is fundamental to tackling a strategy to change our energy model successfully.

To do this one must start with a meticulous **economic and social audit** of all the costs that are ascribed to the electric rate, as well as the criteria that determine the prices per kWh for each electric rate currently in force. The audit should start with a complete analysis of all the types of income the electric power companies have been receiving since at least the 1997 reform of the electricity sector.

As a complement to the economic audit, whose primary objective would be to know the reason for the current deficit situation, there is a clear need for **a thorough reform of the electricity market itself** based on the following principles:

- Simplification: The different actors involved in supplying electricity should be compensated in the most transparent way possible so that citizens can participate knowledgeably in the debate about the optimum energy model.
- Fair compensation of different technologies: We understand that it does not make sense to have dysfunctional policies like those that allowed power plants which began operating before the 1997 reform to be enjoying, under certain economic conditions, years of extraordinary profits in the period since the change in payment structure. Likewise, compensation must include the negative impacts that certain technologies create when viewed from environmental, social or macroeconomic standpoints.
- Hierarchical ordering of technologies: We also believe that maintaining and even reinforcing the principles that renewable energy power plants must be given priority in the system (although not over devices that increase efficiency and savings) is essential. Through the electricity planning cited above, other technologies would be included in accordance with economic, social and environmental criteria, although always secondary to clean energies. This would imply that the public sector exercise greater oversight of specific plants serving as backups to intermittent renewable energy plants.

Group 2: Specific measures to implement the change in energy model

As far as the specific measures for promoting the new energy model, we will focus on two:

1. The **establishment of a public, transparent negotiating group** led by the Spanish government and made up of the political parties, consumers, representatives from companies in the sector, workers and environmental organizations. This group would have as its goal the approval of a **National Energy Plan** that offers the stable energy model that our country needs with the greatest social and political consensus possible.

This committee would deal objectively and thoroughly with the most efficient and economic ways to bring about a transition to the NEM, starting from the shared conviction that no energy model makes sense if it is not based on savings, efficiency, intelligent management, clean and renewable energies and energy sovereignty.

2. However, we cannot just leave things as they are while we wait for the findings of that group. Emergency measures are urgently needed to mitigate the dire straits in which the renewable energy sector currently finds itself, as we watch the investment that we have made in a leading-edge, future-oriented sector being destroyed in a few months.

In particular, we propose two specific measures related to the promotion of self-supply and the restoration of the legal protection of renewables.

In the first place the **elimination of all kinds of barriers to self-supply** of energy produced by consumers for themselves, whether it take the form of instant self-supply or that of net balance – that which allows the surplus energy to flow to the electrical grid in order to recover it later. We call for the rapid approval of a net balance mechanism free not only of subsidies, but also of limitations other than technical ones, under which consumers pay only for the services of the grid that they actually use. A mechanism like the one proposed will not generate any income transfers between those consumers and others, while at the same time offering enormous advantages for consumers who opt for it, as well as for employment and the society as a whole.

In the second place, the **recovery of the legal protection** of renewables, which has been heavily damaged in recent years and which affects its future development enormously must be begun immediately.

In particular the provisions in the Royal Law Decrees 14/2010 (retroactive funding cuts to photovoltaic projects) and 1/2012 (indefinite moratorium on renewables) that affect existing renewable energy projects must be repealed. The **energy sector audit** discussed in the prior point will be sufficient to bring to light the huge economic resources that will be freed up to support not-yet mature technologies.

The transition to more advanced models of development for renewables must be able to rely on a clear long-term strategy and adequate planning of energy infrastructures, without abrupt halts in activity or retroactive measures that affect either investments already made or future ones.

3. As a first step toward the NEM, the **future of nuclear energy** urgently needs to be dealt with. We understand that the only possible future for this technology is its complete dismantlement within time periods which are reasonable from the technological/economic point of view and which take into consideration the social implications that will result from this orderly shutdown as well. Nuclear energy is incompatible with the entry of new clean electric power plants, as the repeated disconnection of wind

farms to allow the dumping of the electrical production of the plants. Likewise we do not feel that the construction of new radioactive waste storage sites (which, in addition, means the creation of new nuclear zones) is justified given that the production of additional waste must be clearly limited both in time and amount.

Group 3: Cross-cutting measures

In addition to the measures in the two preceding parts that are centred on the electricity sector, general policies to manage energy demand, savings and efficiency must be implemented. In Spain these policies have been developed very hesitatingly and almost exclusively through sectorial energy efficiency and savings plans (industry, transport, building or agriculture). In addition, the budgets for these policies have virtually disappeared for 2012 and 2013. The European regulations in these areas (such as the energy certification of buildings) have not been fully taken up, nor have tax regulations been used to push them. If in recent years the measures have lacked ambition, depth and continuity, now it can simply be said that there are no measures. It is no surprise in this regard that we maintain an energy intensity differential 24 per cent higher than the EU-15.

In the first place, the approval of an **energy efficiency and saving law** is essential, one that fully incorporates the European directives and that develops the means for planning savings at different territorial levels, that defines the measures to manage the demand from the final energy consumption sectors, that regulates energy audits and energy service companies (ESCs), that establishes energy requirements in the design of products, that puts an expiry date on obsolete technologies and wasteful uses of energy in lighting and heating, and that establishes more advanced measures of energy efficiency for buildings, equipment and vehicles, as well as urban design.

In addition, a redefinition is needed of the **Energy Efficiency and Savings Plan** for 2011-2020 so that it includes measures to manage demand, support technological measures in the processes of transforming energy for its end use in all sectors, as well as measures to provide information and raise public awareness. The setting up of a national fund for energy efficiency as established by the new European directive must be explored. This is also an opportunity for the energy efficiency sector, which now accounts for more than 280,000 jobs, to develop even more.

Building

In regards to the construction sector, an ambitious **plan to promote the energy rehabilitation and modernization of dwelling units and buildings** is needed to establish compulsory efficiency requirements for existing buildings, to regulate the energy certification of those buildings and to guarantee economic aid for this change. One way to finance energy rehabilitation work is the granting of qualified loans (loans from private financial entities whose terms have been set by the government) that can be paid for in a few years through the energy savings realized after rehabilitation.

As far as new construction is concerned, an ambitious overhaul of the Building Code (Código Técnico de la Edificación [CTE]) is needed that provides for the inclusion of all measures needed to reach the goal of having buildings with virtually zero energy consumption in a short period of time and covers every aspect of building from the integration of new with existing or projected buildings to the design itself.

Transport

The transport sector consumes a third of primary energy, basically in the form of petroleum products. For this reason it constitutes a key sector for achieving the economic, social and environmental objectives the NEM proposes. Because of this, and despite the fact that changing the energy trajectory presents more difficulties than in the case of the electricity sector, it is essential to authorize measures which allow it to move ahead quickly in its transformation. The following are among such measures:

- Promotion of public transport and the end of all measures that promote the use of private automobiles, using the resulting increase in savings in time and resources to facilitate the movement of people and the reduction of urban congestion. Promote car sharing.
- Electrification of transport: Increase the electric rail transport of goods; increase electrification in public transport with new train, subway and trolley lines (even using these lines to transport goods); develop the electric vehicle, giving priority to electric buses, lorries and vans for short distances, but also to electric cars and motorcycles for public and private use.
- Encouragement of urban planning that creates proximity, limiting the number of dwelling units, work centres or retail and leisure services on the periphery of urban areas, as well as the urban sprawl which increase the need for travel.
- Creation of spaces for the most sustainable transport alternatives, such as the bicycle or pedestrian-only streets.
- Promotion of local and medium distance production and trade in order to reduce the amount of transport needed for provisioning.
- Alternatives and innovations of any kind that reduce the consumption of resources and the impact associated with transport needs, such as use of the European motorways of the sea.