

Alternative Strategy for the Energy Sector Vision for the Year 2030

Energy Democracy as a fundamental
Socio-Ecological Transformation Policy Tool
for a Left Government in Greece

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Intro - Towards a paradigm shift.....	2
1. Technological Base of the Energy Sector / Energy Mix	3
1.1. Electrical Power System - from fossil to renewable and from central to dispersed generation	5
1.2. Transport System - from the highway to mild mobility means	6
1.3. Building Infrastructure - from the current energy consuming building to an energy efficient model	6
2. Control of the Energy Sector / Energy Democracy	7
2.1. Energy Democracy and Major Regulatory Steps	7
2.2. Structural Relations with the Program of Reconstruction of Production	8
2.3. Social Subjects of Transformation	10
Discussion	12
Relevant material	13

Intro - Towards a paradigm shift

The scope of this report is to examine the opportunities and barriers regarding an aspirational target of changing the paradigm in the energy sector through means of alternative policies applied from a possible future left government in Greece. Evaluating the implications of the various pathways, identifying the actors involved in the process and designing a collective mobilization of the crucial social powers to work towards the strategic goals cannot apparently be described in detail here. Nevertheless, the fundamental principles of the alternative strategy will be discussed and possible limitations, which need to be overcome, will be listed in order to fully access the potential for possible alternatives within one of the key sectors of today's modern economy, the energy sector. These limitations are technical, financial, social, spatial and environmental but mainly political ones, which should be dismantled in order to initialize a democratization process in the energy sector with a clear class perspective.

The broader context, within this roadmap needs to be considered, is defined by the combination of a severe *financial-economical and ecological crisis*. The mutual interaction of these two crisis elements creates the need for major political decisions, which need to be made with the broader possible social consensus. It is also obvious that the energy policy within a small country, i.e. Greece, cannot by itself mean a shift in the global paradigm in the energy sector worldwide. However, it is fundamental for any left political body to think, plan and negotiate openly with the society the transition program towards the strategic goal of energy democracy, access to clean energy and class-biased energy policies, which would favor the broad mass of the population. Production, distribution and consumption patterns of energy need to be revised both in terms of technology as well as in terms of ownership schemes and institutional regulatory framework.

The alternative energy policy needs to be integrated in the overall strategy to tackle the *climate change* and its effects on the lower income parts of the population. The Mediterranean zone is considered among the most vulnerable spatial departments of the European continent (rise of sea level, land use implications, effects on the agricultural sector) and therefore any left political body needs to put the combat against climate change in the center of its strategic priorities. The greenhouse gas emission targets set through EU need to be fulfilled and further expanded in the road to 2030. The costs for the society in case the climate change effects worsen in the Greek geographical space, according to the latest research outcomes, will be severe.

Apart from the climate change, *recession in the global economy* following the financial crisis of 2008 is defining the economical and political space. As a result, *political crisis* in countries of S. Europe has brought up the question of power for the left and the necessity for a concrete alternative strategy against the neoliberal agenda is becoming increasingly vital. Especially in Greece, several parts of the production capacity have been destroyed leading to unprecedented levels of unemployment. In the energy sector, structural contradictions in the renewable energy sector have resulted in collapse of the market setting limits to its further expansion through the current market mechanisms. As part of the IMF memorandums signed, privatization of the Public Power Corporation, which used to be a state monopoly before the liberalization of the electricity market in 2001, has initiated a conflictual process leading to a new landscape in the energy sector.

An alternative energy strategy should also incorporate in its approach the general recent instability in the geopolitical area of S. East Mediterranean zone. Therefore issues, which are crucial for the energy planning such as energy security and sufficiency as well as the access to energy resources from the east (natural gas), should be carefully examined in the medium and long term strategic planning. Building an energy system on the basis of local available energy resources, mainly renewables in the case of Greece, is considered to be one of the key drivers of the strategic thinking applied in this report. Nevertheless, the transition program should be able to combine the long-term goals with the short time frame plans, which are vital for the first steps of a shift in the energy sector paradigm.

1. Technological Base of the Energy Sector / Energy Mix

It is important to acknowledge that this report cannot provide with a detailed and qualitative description of the energy mix which would need analysis and modeling of different possible scenarios, involving costing calculations in order to fully exploit the alternative approaches. However, specific milestones will be described in order to define the general frame of the policies, which should be implemented by a left government. The report "*General Report about the current situation of the energy sector in Greece*" gives a description in depth of the technological base, which is currently in place e.g. the electrical power system includes mainly thermal units based on lignite, natural gas, oil, large hydroelectric power plants and a few renewables - wind, solar, geothermal etc. Apart from electricity though, fuels for transportation, industrial and residential use should also be part of a transition program. Actions in the transport sector, energy conservation and land use changes will not be fully covered in this short report.

The oil sector is covered in the "Transition beyond oil" report. The current report will focus on the vision regarding the electrical power and shortly on the transport sector, which corresponds to a large share of the final energy consumption in Greece. Figures 1,2 and 3 illustrate available data from 2011 regarding energy consumption and production by sector and fuel.

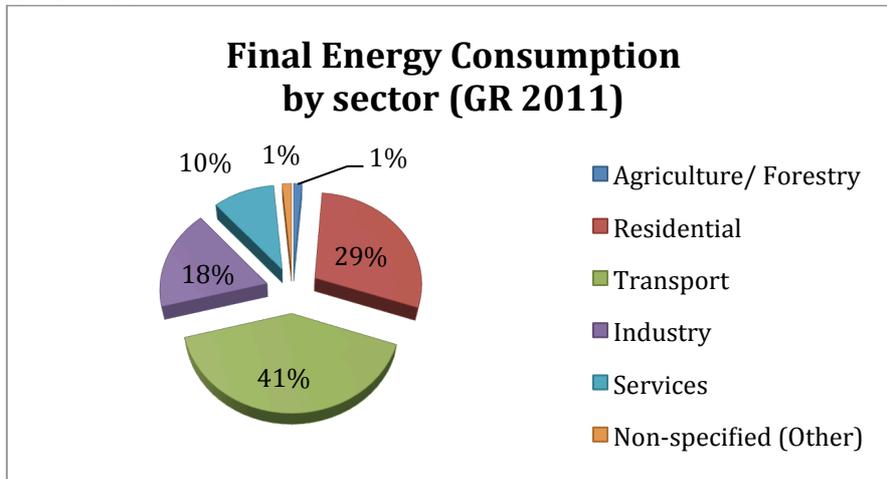


Fig. 1. Share of the final energy consumption for different sectors (Eurostat, 2011)

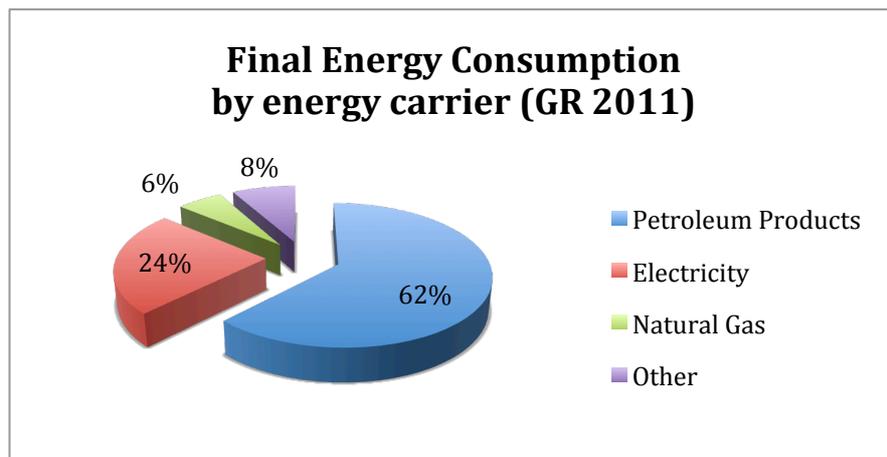


Fig. 2. Share of the final energy consumption for different energy sector (Eurostat, 2011)

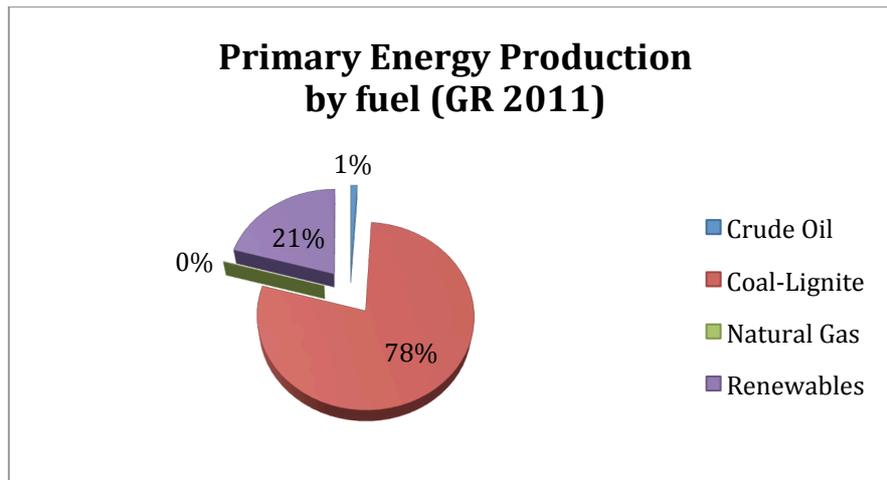


Fig. 3. Share of the primary energy production for different energy sources (Eurostat, 2011)

1.1. Electrical Power System - from fossil to renewable and from central to dispersed generation

The key issue for an alternative strategy would be to discover the paths in order to change from the current centralized fossil fuel based energy system to a more dispersed renewable one. As illustrated in the Figures above, coal, lignite and oil are the main drivers of the energy system in Greece. For this purpose a restructuring of the current grid infrastructure has to take place and specific steps regarding the replacement of lignite and oil in the energy mix have to be carefully drawn. The roadmap towards 2030 could target for a more than 50 % of the primary energy production to be covered by different types and sizes of renewables. The electrical power system of Greece, both interconnected and non-interconnected island systems, could facilitate an extensive integration of renewables given the large potential of wind, solar, hydro and geothermal sources. The phase-out of lignite and oil cannot be implemented in the short-term policy frame since the power system has been designed to a great extent according to the conventional power production principles. However, novel technologies e.g. smart grids, combined with a gradual decentralization of the production units and controllable residential and public infrastructure loads, can provide with the necessary technological background in order to reach high levels of renewables' penetration in the electrical power system.

The plan to reduce dependence on fossil fuels and promote renewable energy certainly can not in the short term level overrule key energy challenges which need to be addressed: security of supply and energy efficiency, optimal utilization of domestic energy sources and reduction of imports, management of ever-increasing energy poverty, support financially weaker and already burdened by multiple

memorandum policies households and businesses, productive reconstruction etc.

1.2. Transport System - from the highway to mild mobility means

Since transport accounts for the 40 % of the final energy consumption, radical changes in the public means of transport, in addition to extensive investments in electric mobility infrastructure, could make the above-mentioned targets achievable. Modification in the electrical grid can combine the extensive use of electric cars with high renewable power penetration decentralizing the energy buffer needed. Extension of the national railway system, which in Greece has not been developed, unlike the central European experience, should also be part of the re-thinking plan for the public transport system. Mainly the transport network of highways, which interlink the large commercial ports, should be re-designed since transport of goods through gas fuelled tracks accounts for a large share of the final energy consumption in total. New mobility possibilities, including bicycle road networks and walking routes within the urban space, can reduce significantly the traffic stress and fuel consumption corresponding to the private car use predominant approach. Building an alternative energy system requires a massive re-planning of the urban life with transport being the basic energy-consuming sector.

1.3. Building Infrastructure - from the current energy consuming building to an energy efficient model

A serious part of the energy consumption in the residential sector is due to losses of the current low efficiency building stock. Especially in the urban highly populated building structures, energy consumption for lighting, heating and cooling purposes is significant because of previous generation lighting technology and obsolete insulation. Improvement in the energy management systems should be top priority in the policy framework and is directly attached to the strategic plan for a radically different energy model. In this context energy savings are considered to be among the largest energy resources available.

A comprehensive program for energy upgrading of buildings could initiate a boost in the construction industry leading to significant energy savings. Such an initiative on a national scale should be designed following strictly social and development criteria, as opposed to current projects, which are fully operated by the bank sector. Given the tradition of the domestic construction sector, development would

also be reflected in the industrial sector (building materials, equipment, solar, heat pumps, insulation, lighting etc.).

2. Control of the Energy Sector / Energy Democracy

2.1. Energy Democracy and Major Regulatory Steps

The energy transition program, seeking to address the challenges of a left program, should first draw the long-term vision providing with some concrete examples of implementation in different time scales, from days, months to years up to 2030 considered here. Such a process involves ongoing conflict, contradictions and possible dead ends. Acknowledging this complexity, the basic means of policy, in terms of priorities and strategic approaches, will be briefly described in this section.

The multiple and complex social and economic factors, which need to be considered, make clear that energy planning is never a purely technocratic project administered by "experts" in laboratory conditions. Although data collection, studies and documentation should always be available, a broad involvement of the various social actors in the process itself constitutes a vital condition of any attempt to draw such a program. This transition program should be a dynamic and constantly evolving and adapting to the changing social needs process, in parallel to the technical aspects of the issue (defining the energy mix and selection of technologies). Its fundamental goal is to build the necessary social consensus through mobilization of the social forces in its implementation plan. The need for an integrated, democratic planning, which will escalate both upstream (international, regional, European level) and downstream (regional and local authorities), is vital within the strategic frame of a left political body.

A brief description of energy democracy measures in the energy sector, focusing on the future of the Public Power Corporation (PPC) as a key actor, has been analyzed in the background note for WG-2 for the Rosa Luxemburg Foundation conference on Socioecological Transformation - Focus Energy held in Vienna, 3-5 July 2013 written by Y. Eustathopoulos. The reforms needed in PPC to ensure its social service mission should be based on the principle 'Energy as a Right/Public Service'. Institutionalizing democratic procedures within PPC's management in order to address the interests of several different stakeholders, internal and external, should be among the first steps in order to materialize the demand for energy democracy. An institution with the productive force such as PPC can contribute significantly to the construction of a new productive, ecologically and socially just, pattern in energy.

In the same report, additional fields of actions/regulations are being mentioned including a Right to Energy, improvement of the efficiency of existing social tariffs, introduction of support unit for assisting consumers in poverty, establishment of a Solidarity Fund to finance these mechanisms etc. Apparently, such a paradigm shift in the role and operation of a public service company requires radical reforms in the electricity market in order to combine a private-interest driven market with fundamental social objectives. Therefore the focus of the policy applied should be to discover and/or re-establish the necessary mechanisms and institutional procedures required for a 'socially regulated' electricity market.

As described in the program of SYRIZA, reconstruction of production could be based on three main pillars in terms of control and ownership: a radically reformed public sector, a private sector under social and ecological regulatory control framework and the newly born sector of social and solidarity economy. In some cases of public enterprises, development consortia with foreign capital could be organized in order to expand the productive capability of the state and other public stakeholders in the sector.

A crucial aspect for all the above-mentioned major regulatory steps - and those additional ones, which are not being covered in this report - is apparently the restrictions, which are imposed in any member-state of EU regarding operation of energy markets. Of course, these restrictions should be faced as open fields of debate and political struggle and not as solid, historically fixed terms. This is why the alternative strategy regarding the energy sector, although it should have the European context as an important parameter, has to draw the basic roadmaps in all geographical scales; local, regional, national, European and international. Some compromises will most probably be needed; this is why any strategic plan should involve several alternative pathways to ensure its stability in the long-term political time.

2.2. Structural Relations with the Program of Reconstruction of Production

The organic interrelation of the energy sector with the overall plan for reconstruction of production, as well as with individual areas of production, requires a horizontal application of policies in order to initiate the ecological and social transformation of the economy. Both in terms of strategic objectives (transformations in the energy mix and in the production/consumption patterns) and the means of implementation (decentralization of production and social entrepreneurship), transformations in the energy sector should be

consistent and interlinked with reforms in the overall mode of production. The energy strategy should constantly intervene in the discourse of plans for spatial planning, environment, public works, utilities, participatory strategies for trade unions, development of R&D programs etc. This multidimensional character of the energy sector defines it, alongside with the bank sector, as one of the key pillars upon which any left politics will be challenged.

An illustration of this interlink with other sectors can be found in the case of rural solar systems. Integration of farmers' communities in the renewable energy sources (RES) sector can not be done in terms of opposition to the main activities of the primary sector (i.e. the character of current rural investments in photovoltaic systems, even and especially in high-productivity land). A plan for the integration of farmers in electricity production applications from agricultural remainders (through cooperative patterns in order to achieve economies of scale) should therefore be set up. Electricity produced in this process can be used to supply local rural activities (electricity autoproduction). Respectively, heat production through systems associated with the rural economy (geothermal, biomass, solar systems) provides with the capability to replace oil and gas consumption.

The synergies which are therefore required can only be ensured through activation of all the relevant citizens' networks, movements, collectives, assemblies, local authorities institutions etc. This process of course penetrates the democratic reform needed in the general public structure of the state, a field which can not be analyzed in detail in this report. Energy as a common resource and a vital means of existence can not be dealt with strictly sectoral criteria and decision-making processes. One basic stakeholder in the energy sector is society in its generality, although mediated through its different institutions.

Social innovation, through creation of collectives, public enterprises, social solidarity foundations, has to become the key driver of the economy if such a strategy should be applied. In the current historical context, there are many examples of newly born collective entities in the form of collectives, cooperatives, social enterprises etc., which can provide us with images from an alternative future. A left government should push forward these social experiments, expand their applicability in various sectors, challenge their efficiency in order to accelerate their expansion, and apparently create the necessary institutional framework in order to support their viability. This process could also be part of the policies against the massive unemployment, by creating a new productive field. The issue of the social subjects of the transformation under discussion is treated in the following section.

2.3. Social Subjects of Transformation

Any attempt towards a transition program from the left ends up an empty signifier if the constitution of social subjects and collective entities, thus the implementers of the transformation, does not hold a key position within this process. This constitution is part of the current struggles against privatizations, the collective ownership experimentations through cooperatives and any other contradiction, which manifests itself in the energy sector.

Identification of these social subjects requires a thorough approach of the energy sector from different points of interest and a comprehensive overview of all the actors, in the form of public, private, social institutions etc. involved in the process. This involves several sectors, i.e. production of energy, technology, distribution, consumption, finance, market regulation, administration, agricultural institutions, local and regional authorities etc.

Transformation of the existing social actors to subjects, which could play an active role in the paradigm shift, requires identification of those social processes at the present, which could be signs of a future vision for the energy sector. In several countries around the world new forms of collective ownership, public control or mixtures of public-social control have emerged. Although application of the so-called best practices in the field of class struggles and policies has proved several times disastrous throughout recent history, it is worth mentioning some basic alternative models of public/social management of the energy sector at a European and global level. A more detailed study should include analysis of the specific context in each case, which allowed these forms of social control to develop in order to identify the key contradictions of the process.

During the last decade the trend of municipalization in the electricity sector has expanded considerably in Central Europe, mainly in Germany, leading to an increase of municipality programs for solar roofs in residential building, heating systems in public buildings and control over the distribution systems. The negative experience of privatization has strengthened this tendency; the role of local authorities should be central both in the struggles against privatization in the current political time frame as well as during the transformation process. The revival of local economies through the organic association of local authorities with programs involving cooperative schemes by local technicians, scientists and workers in projects around public and municipal buildings could be among the main lines of the program of SYRIZA in the upcoming elections.

Different types of cooperatives and collective investment schemes in the field of production applications from RES and electricity supply should be formed. The size of these forms of ownership could vary depending on the specific geographic and technological context from tens to thousands of members. Ownership of the production facilities and the related infrastructure as well as access to the control and regulation of the sector is a key principle of the alternative strategy for 2030. The tension between these structures, which are collectively owned, and other private entities will be crucial for the outcome of the confrontation in the energy field. This factor illuminates the need for class-oriented energy policy at a national and - even more so - at a European level.

Hybrid forms of ownership, including cooperatives, individuals, institutions, local governments, public enterprises are also cells of organization and management of production to be exploited in order to disengage from the limiting division of state-private, as this at least expresses itself in the present historical condition.

Discussion

A government from the left needs to explore new methods of policy on energy within an economic field where the public, social and private communicate, cooperate and several times collide as well. Therefore the formation of social subjects through a process of constructing the public interest on the basis of participation and democracy is the cornerstone of an energy plan which will seek to mark a new era at a European level.

On the road to energy democracy, trade unions, consumers and producers, movements and governing bodies at all scales are invited to assume this historic responsibility with the sincere, genuine and permanent support of the Left which claims to overthrow the current mode of social and productive relations. Especially under the current political regime ruling classes use the new geopolitical 'big ideas' (exploration and extraction of hydrocarbons, gas pipelines etc) as materials in order to construct the 'success story' of the memorandums, it is of vital importance to open up the debate on energy from the perspective of the real social needs. This means that an alternative strategy should not be constructed as a response to the opportunistic political choices of a system in the brink of collapse which destroys any possibility of democratic planning in the field of production.

The vision for 2030 is being manifested to us through the right questions, upon which the necessary social alliances will be built. A renewable, dispersed, democratic and efficient energy system with expanded forms of collective ownership and control seems to be the only viable choice in order to face the current financial, political, ecological and social crisis. Reforms in the public and private sector, institutions operating at the social and solidarity economic field are key measures in this roadmap towards a new paradigm shift.

The stakes are high and so are the expectations from the vast majority of our society.

Relevant material

- *Energy Alternatives: Surveying the Territory*, ed. The Corner House, May 2013
- *Socioecological Transformations*, ed. JEP, March 2013, available online [here](#)
- *Socio-ecological Transformation and Energy Policy in Latin America and Europe*, International seminar, Vienna, 11-14 July 2012, Rosa Luxemburg Foundation Brussels; Prof. Dr. Ulrich Brand, Vienna
- Program and Elaborations from the Energy Department of SYRIZA
- *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions*, available online [here](#)
- *Background note for WG-2 on Energy democracy – controlling energy companies on the local and national level*, Yanis Eustathopoulos, Socioecological Transformation – Focus Energy, Vienna, 3-5 July 2013, Rosa Luxemburg Foundation
- *Public Services in the European Union and & in the 27 member States - Statistics, Organization and Regulations*, May 2010, ed. EC, available online [here](#)