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Ecological Industrial Policy

A Strategic Approach for Social Democracy in Germany

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- With the concept of ecological industrial policy Social Democracy in Germany has put forward a way of reconciling the economic and social interests of an industrialised country with environmental protection and sustainability. The concept is the result of the Social Democratic Party's decades of engagement with ecological and energy policy issues.
- The concept of ecological industrial policy assumes that »green markets« have substantial growth potential. They will be a major source of future jobs and determine an economy's international competitiveness. Social Democracy must ensure that it is the political force that engages in close dialogue with industry and the trade unions and thus demonstrates its competence to shape the industrial future.
- Government has a wide range of instruments with which it can accelerate and shape the ecological restructuring of industry. These instruments rely heavily on the development of strategic lead markets for ecological innovation.
- Ecological change must be managed in a socially responsible way. Where jobs are lost, alternatives must be created. Fair distribution of the dividends of increasing resource productivity is a key condition of achieving societal consensus on an ecological change.



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Over the past couple of decades environmental goals have come to command majority support in Germany. It is a long time since only environmentalists were committed to these goals: the growing eco-sector has united environmentalism with economic interests. In recent decades, the German Social Democrats have made an important contribution to this development. Since 1986 the party has vowed to phase out nuclear energy and to boost alternative forms of energy generation.

Furthermore, the SPD has formulated ambitious goals through to the middle of the 21st century:

- By 2050, energy requirements in Germany are to be met by renewable energies.
- CO₂ emissions are to be reduced by 95 per cent in comparison to 1990 by 2050.

These goals are related to the idea of making Germany the most efficient economy in the world in terms of energy and raw materials usage. This serves the purpose, on the one hand, of reducing raw material costs, and on the other hand, of achieving and safeguarding technological advances in international competition.

What Is Ecological Industrial Policy?

Since the middle of the past decade the notion of »ecological industrial policy« for the SPD stands for an economic policy oriented towards sustainability. This policy was shaped in 2006 by former Minister of the Environment Sigmar Gabriel (now leader of the SPD) and his secretary of state Matthias Machnig (now economics minister in Thuringia).

The first elements of this policy were implemented in the early days of the Red-Green coalition in 1998. These included environmental tax reform; the agreement (first abandoned and then reintroduced by the current conservative government) on phasing out nuclear energy, and the Renewable Energies Act which is aimed at fostering electricity supply from renewable energy sources and has been copied internationally. However, it is only since the end of the Red-Green coalition in 2005 and the formation of the Grand Coalition – CDU, CSU and SPD – and the SPD's responsibility for the Federal Environment Ministry (BMU) that »ecological industrial policy«

as such has obtained a conceptual framework and has been further developed into a »political brand«.

This concept deliberately fuses two things hitherto considered contradictory: the environment and industry. Ecological industrial policy thus is not merely an industrial policy aimed at promoting environmentally friendly products: instead, ecological sustainability is to be understood in future as a systemic task, encompassing all aspects of production. The whole industrial production system is to become more resource-efficient and environmentally friendly.

Two developments in the recent past triggered the development of this approach. First, the »environmental question« - accelerated by, among other things, climate change conferences and the Stern Report in 2006 - became one of the major political issues of our age. In competition with the other parties (not least the increasingly strong Green Party), the SPD had to come up with a specifically social democratic answer to this question. Second, a strongly industrial export-oriented country such as Germany faced the key challenge of pursuing an industrial path which is economically and environmentally compatible with foreseeable global economic developments in, among others, the BRIC countries population growth, economic growth, increasing energy demand – and the consequences this has for the global competition for raw materials, climate change and pressure on natural resources...

The concept of environmental industrial policy was brought into the technical and public debate by the Federal Environment Ministry in the form of two discussion papers. The basic principles were described in a memorandum¹ in 2006, while a second paper in 2008 refined the instruments of an environmental industrial policy.²

Strategically, the aim of the concept is a »social and environmental New Deal«. After the Fordist »second industrial revolution« a »third industrial revolution« has been proclaimed centred on improving energy and resource efficiency. The aim is to reap a »double dividend«: first,

^{1.} BMU (2006): Ecological Industrial Policy - Memorandum for a »New Deal« for the economy, environment and employment. http://www.bmu.de/files/pdfs/allgemein/application/pdf/memorandum_oekol_industriepolitik_eng.pdf

^{2.} BMU(2008): Sustainable Policy for Innovation, Growth and Employment, http://www.ziel21.de/fileadmin/user_upload/files/EGS_topics/teachers_training/broschuere_oekol_industriepolitik_en.



within the framework of international competition, new products and markets are to contribute to safeguarding Germany as a production location and to maintain or create jobs; second, this is supposed to help solve environmental issues and, by boosting resource productivity, to increase the scope for income distribution. The suggestion is that Germany and Europe adopt an "economic specialisation strategy" based on their technological leadership with regard to environmental technologies and their application.

The conceptual foundation of ecological industrial policy is the notion of »lead markets« developed by innovation theory. According to this approach, advances in international competition with regard to new technologies result from ambitious innovation systems in the domestic market. This includes not only research, but above all highly trained specialists, demanding consumers, cooperative networks, infrastructure and state support. (Lead) demand initiated by government can become an important factor in the development of new technologies, such as the impetus given to solar and wind energy by the Renewable Energies Act.

The idea that green markets have considerable growth potential is based on market research: in 2005, the global green market was worth 1,000 billion euros – by 2020 this will approximately double. The assumption is that Germany's share in environmental technologies will rise from 4 per cent (2005) to 16 per cent (2030).

Furthermore, sectoral market surveys helped to identify important future »green markets« and a SWOT (strengths, weaknesses, opportunities and threats) analysis was carried out for Germany as a production location. Primarily concerned are energy generation and power plant technologies, energy efficiency technologies, recycling and waste management technologies, mobility and transport technologies, water and sewage technologies, environmental engineering/systems engineering, life science, nanotechnology, ecodesign and bioplastics/biorefineries.

To boost growth potential in these sectors eight guidelines were formulated in the Memorandum for an environmental industrial policy. The core elements are:

■ The state should play a pioneering role in industrial policy by focusing on strategic areas and lead markets.

- The development of benchmarks to orientate technological development in terms of particular goals and visions.
- The development of an intelligent regulatory framework to promote innovation.
- Maximisation of export potential.
- Acceleration of the market introduction of innovative technologies, among other things by means of government procurement policy and market launch programmes.
- Improvement of innovation financing for companies.
- Support for technological flagship projects to provide orientation and promote acceptance.
- Establishment of new institutional dialogue structures, including within the Federal government (departmental cooperation in a »cabinet for industry«).

These guidelines were refined in a second document in 2008 and underpinned with concrete instruments and policy proposals for the Federal government. Both documents were preceded by technical groundwork, both scientific and in terms of economic consultancy, and they were discussed in dialogues and at conferences with stake holders from business, trade unions and the environmental movement.

The aim was to develop an intelligent mix of instruments adapted to each sector which targets both the supply and the demand side. The idea is not to try to specify individual technological solutions or products in advance, but rather to establish incentives to encourage the market development of an incessant stream of »best solutions«. This mix also includes the optimisation of traditional environmental policy instruments, such as:

- regulatory legislation (for example, a lowering of emissions thresholds for cars or compulsory installation of intelligent energy measurement systems to monitor electricity consumption);
- fiscal measures (for example, the reduction of environmentally harmful subsidies, environmentally differentiated regulations for tax write-offs, introduction of a tax on nuclear fuel).



Furthermore, these instruments are to be interlinked with other economic and structural policy regulatory mechanisms. In this way, a range of objectives will be attained:

- Environmental investments (for example, through a Green Tech fund for those starting up a business).
- Launching new products on the market (for example, loans at preferential interest rates or the guarantee of feed-in compensation for those generating electricity from renewable sources).
- Setting benchmarks (for example, using the »toprunner« approach which establishes the most efficient product as the standard that all suppliers have to meet within a set period if their products are to be licensed).

Key to obtaining acceptance of this approach was the dialogue with important actors, such as the Federation of German Industries (BDI), but also the resumption of discussions with industrial trade unions concerning the future of Germany as an industrial location and the reconciliation of "work and environment", an important trade union line of debate in recent decades. In a statement on the concept developed by the Federal Environment Ministry (BMU) the metal workers' union IG Metall welcomed the approach because it represented both a commitment to the industrial base and a relinguishment of an economic policy that was too strongly fixated on wage costs as supposedly a determining factor of international competitiveness. There has also been a call to link the goal of environmental progress more closely with social progress, especially with regard to the quality of life and work.

The success of this ecological industrial policy in the area of renewable energies alone is impressive, both environmentally and economically. From 2000 to 2010 the proportion of renewables in electricity generation in Germany grew from 6.4 to 17 per cent. The number of jobs in this sector rose from 160,000 to 367,000 between 2004 and 2010. According to Environment Ministry estimates, 262,000 jobs are attributable to the Renewable Energies Act alone.

Debates and the Development of Aims and Objectives in the SPD

With the concept of ecological industrial policy the SPD has picked up and given a conceptual underpinning to the threads of previous discussions which aimed at tying the future of Germany as an industrial nation to environmental challenges and the creation of sustainable jobs and higher quality of life. Even though party programmes cannot be fully relied on as guides to the specific policies a party will implement once in government, the development of the concept of an "ecological industrial policy" can be understood in light of the previous three SPD programmes since the Second World War.

The Godesberg Programme of 1959 identified as "the contradiction of our time the fact that humanity has unleashed the elemental force of the atom and now stands in fear of the consequences". However, it also asserted a clear standpoint on progress in the sense of unleashing the "forces of production". The economic policy goal was "constant economic improvement". The point of reference was the "second industrial revolution" brought about by Fordism. As a result of this revolution "conditions [could be] created which would improve general living standards beyond anything previously known, eliminating the poverty and squalor which still oppress many people".

Since the late 1970s, however, the issue of the environment has been a bone of contention in the SPD. On the one hand, awareness of the »limits of growth« (the title of the report by the Club of Rome in 1972) and the environmental damage arising from mass production and mass consumption increased. On the other hand, the post-War model of economic growth had run its course. Growth rates declined, many social democratic regions were threatened by job losses and from 1982 a conservative-liberal government was in power. Social Democrats and trade unions therefore came under pressure from two sides. As a result, within the SPD intense debates raged between the »labour wing« and an increasingly environmentally oriented middle class concerning the conflict between maintaining industrial jobs and mass consumption, on the one hand, and a sustainable mode of production, on the other.

Although it was not possible to resolve this trade-off – especially in a short- and medium-term perspective – an



intense discussion in the SPD and the trade unions in the first half of the 1980s gave rise to new insights:

- The growing understanding that it is cheaper for the national economy to prevent environmental damage than to have to put it right. An environmental policy based on cleaning up the damage once it has been done is not enough: such damage must be prevented..
- The issue of quality of life gained in importance also among workers. On the one hand, they were exposed to unhealthy working conditions, while on the other hand the effects of the pollution of the environment on workers' children and families became an increasing concern.
- It became clear that environmental protection in particular given increasing unemployment can create new jobs.
- Other countries, such as Japan, also came to recognise that environmental protection is increasingly a technology of the future, whose export potential should be exploited.

In 1984, the SPD Working Group on Workers' Issues (a caucus group within the party with strong ties to the trade unions) agreed on a declaration which, among other things, stated: »employment and environmental policy may not be treated as in conflict. Workers must not be confronted with the false alternatives of an industrial society or environmental policy ... Those who fail to do what they can to protect the environment today put jobs in jeopardy tomorrow.«

The principal demands of the »labour wing« in the SPD were:

- The management of structural change was regarded as a task for the state. It should promote qualitative growth in other words, growth in »green« areas and technologies by means of investment programmes.
- Workers should participate in decision-making on products and production.
- The costs of environmental protection should not be shouldered primarily by the workers. Furthermore, replacement jobs should be created wherever existing jobs are lost for environmental reasons.

In 1986, the SPD party conference reached agreement on the concept of »environmental renewal of industrial society«, which took up this line of argument. Besides a more precise targeting of existing instruments, such as threshold values and liability law, the main demand was the establishment of a special »Work and Environment« fund – in other words, a state fund independent of the current budget – to be endowed with the amount of one per cent of GDP and to be financed by a surcharge on energy consumption. The fund would be used to promote environmental measures and investments in the form of loans to private companies and public bodies at preferential interest rates. In this way, a long-term financing instrument for environmental investment would be created.

The German Trade Union Federation (DGB) passed a resolution in 1985 entitled »Environmental policy and qualitative growth«. The main idea was »acceleration of qualitative growth« by stepping up environmental protection, likewise by an extensive investment programme in the areas of energy, transport, housing and urban development, education and health care, human services, research and technology and of course in protection of the environment.

The SPD's *Berlin Programme of 1989* developed in the 1980s and agreed a few days after the fall of the Berlin Wall was, in turn, strongly influenced by the social and environmental movements of the 1970s and 1980s. In sharp contrast to its predecessor it was critical of growth (although this was a bone of contention within the party) and opted for a »policy of selective growth«:

»Not all growth is progress. Growth is needed of the kind which preserves the natural resource base, improves quality of life and work, reduces dependency and promotes self-determination, protects life and health, ensures peace, increases opportunities and future prospects for all and supports creativity and initiative. However, what endangers the natural resource base, degrades quality of life and diminishes people's future prospects must be reduced or eliminated. «

The key idea was the »environmental reorganisation of industrial society«. Although the text spoke of a »future-oriented structural policy« the concept of »industrial policy« did not appear.



»Progress '90«, a policy document developed at the same time as the Berlin Programme, went into more detail and was intended to prepare the ground for taking over the reins of government after the 1990 general election (in the event, the SPD was defeated). Even at that time the central challenges were identified as climate change and the threat to the earth's biodiversity, but also air and water pollution, waste and dying forests (Waldsterben). The »environmental reorganisation of industrial society« was to be achieved essentially with three sets of instruments. First, higher taxes on energy consumption in order to accelerate innovation and reduce consumption by means of price signals. The ensuing revenues were to be used to increase the net incomes of workers and benefit recipients. Second, stricter environmental legislation (bans, threshold values, speed limits). Finally, the »Work and Environment« programme – to be financed through environmental levies – which would be used to promote private and public investments in energy conservation, public transport and social housing.

The current Hamburg Programme of 2007 again takes up the issue of environmental industrial policy. It links the Godesberg Programme's commitment to technology and industry to the Berlin Programme's concept of qualitative growth. The key idea is that the »great social and environmental challenges« facing humanity cannot be met by means of global calls for austerity and degrowth, but essentially only through entirely new technologies and behaviour. The decisive role of industry is emphasised as is the central strategic role of the state in developing future areas of growth and lead markets: Industry is still of decisive importance for the German economy. Strategic industry policy favours the qualitative lead of our business locations. It strengthens industrial centres and regional economic competences.... Strategic industrial policy must be ecological industrial policy. Ecological market incentives are drivers of qualitative growth. Our chance is to develop problem solutions which can be applied worldwide. To coin new products rapidly into new products and jobs we want a policy closely interlinking research, product engineering and entrepreneurial investment.3

The Combination of Environmental and Economic Modernisation

The ecological industrial policy approach brings together two recent lines of debate in both science and policymaking associated with the Social Democratic Party.

The first line of debate concerns the »modernisation of industrial society«, which encompasses a number of approaches:

- A concept of (on-going) modernisation, according to which the basic institutions of a social market economy are structurally capable of adapting to new conditions in an evolutionary fashion.
- Innovation theories which assign to technological innovations an important role in »long-wave« economic development.
- Regional economic and structural policy approaches which were developed primarily in the 1980s and 1990s in regions for example, the Ruhr characterised by major structural dislocations.
- Keynesian ideas which sought to link up economic and structural policy goals with programmes for »investing in the future«.

SPD-governed North Rhine Westphalia in particular has amassed valuable experience in managing structural change since the 1960s.4 This policy began during the decline of heavy industry in the Ruhr (coal and steel) with the building of new infrastructure (for example, colleges and universities). This was extended to include investments in research and development and eventually led, via dialogue-oriented regional structural policy, to a policy concentrating on the »strategic« development of business clusters and lead markets. The now strong green technologies sector in North Rhine Westphalia has its roots both in the modernisation of »old« industries – for example, companies from the coal and steel industry were able to deploy their competences in technological environmental protection - and in innovative new businesses and start-ups.

^{3.} Hamburg Programme: Principal guidelines of the Social Democratic Party of Germany, p.25f,, http://www.spd.de/linkableblob/5056/data/hamburger_programm_englisch.pdf

^{4.} Rolf G. Heinze, Josef Hilbert et al. (1996): Strukturpolitik zwischen Tradition und Innovation. Nordrhein-Westfalen im Wandel (Opladen).



The second, predominantly environmental line of debate was strongly influenced by the discussion on the limits of growth, building on the report by the Club of Rome (1972) and the Brundtland Commission's report on sustainable development (1987). Among those with Social Democratic allegiances two actors in particular symbolise these discussions and have decisively shaped the social democratic debate, also far beyond Germany's borders:

- Former head of the Wuppertal Institute for Climate, Environment and Energy and SPD MP Ernst-Ulrich von Weizsäcker, as (co-)author of the »new report to the Club of Rome«, had a hand in shaping the formula »Factor Four« (»doubling wealth, halving resource use«).⁵ The central idea of the report is the technological possibility of a fourfold increase in resource productivity, illustrated on the basis of many practical examples.
- The possibility of a switch to solar energy supply owes its popularity not least to the contributions of the SPD politician Hermann Scheer (who died in 2010), who was an early advocate⁶ of a switch to renewable energies and was often honoured for his activities, not least by the Right Livelihood Award also known as the »alternative Nobel prize« in 1999.

For all the tensions between these two approaches on some questions, they are nevertheless united with regard to their optimistic orientation towards new technologies, products and markets to meet the environmental challenge. These approaches are quite distinct from those which rely on the renunciation of consumerism, ascetic lifestyles and a niche economy, as propagated to some extent by the Greens and the movement. Research, science and industry were not regarded as opposed to environmental modernisation, but as partners to be won over. While some European Social Democrats in the 1990s saw the service sector as the economic future, the SPD (or the regional and federal governments led by them) have not given up their strategic orientation towards industry.

The main question here is:

■ Is it sufficient to »green« the existing capitalism or will more far-reaching reforms be necessary?⁷

As further questions arise:

- What scope is there for further growth in the most advanced economies in the face of growing global resource demand?
- Are (environmental) goals and innovations achievable within the framework of a financial capitalism dominated by the imperative of short-term high returns?
- Does the power of the large energy groups have to be reduced, among other things by boosting small energy producers, a return to public utilities and state (co-)ownership of energy networks?
- Is ecological I industrial policy merely a continuation of a policy of high exports and current account surplus by »green« means? Would not a future sustainable growth path – complementing ecological industrial policy – have to rely more on the strengthening of high quality social and public services?
- And what does all this mean for such issues as sharing the costs of environmental reorganisation in society, social distribution and government tax and finance policy? New Deal? Prospects for Social Democracy in Competition with other Political Forces

New Deal!? Strategic Perspectives for Social Democracy

However these questions are answered, the ecological industrial policy approach opens up an important political and strategic field for Social Democracy. »Green

Although there is a broad consensus in the SPD on the goals and instruments of ecological industrial policy, a number of questions remain undecided. There will have to be a debate in the coming years on the scope of a »social and ecological New Deal«.

^{5.} Ernst-Ulrich von Weizsäcker et al. (1995): Faktor Vier: Doppelter Wohlstand – halbierter Naturverbrauch. Der neue Bericht an den Club of Rome, Munich.

^{6.} Cf. Hermann Scheer (1993): Sonnen-Strategie. Politik ohne Alternative, Munich

^{7.} For a survey of different concepts, see Frank Adler and Ulrich Schachtschneider (2010): *Green New Deal, Suffizienz oder Ökosozialismus? Konzepte für gesellschaftliche Wege aus der Ökokrise,* Munich.



issues« will be one of the main preoccupations of our societies in the coming decades. No political party will be able to hold power for long or enter into stable political alliances if it takes no account of environmental responsibilities. The integration of the economy and the environment is a hotly contested political field.

Internationally, the »Green New Deal« is being discussed as a key project for the future.8 From a Social Democratic perspective this notion is not without its problems, since it characterises a comprehensive design for the future – which is by no means only environmental in nature – as »green« and thus suggests a proximity to the various »green parties«. In opinion polls in Germany the Greens score currently significantly over 20 per cent. In certain social milieus »the green question« is an identity-providing lifestyle. Yet, an adequate response to it depends on a social consensus that combines the »green« with the »social question« and the questions of future forms of production, value creation and work.

Modern »compassionate« conservative parties have also taken up the environmental issue and the notion of quality of life. In Germany, in response to public pressure, it is a conservative government that has pushed the environmental energy transition and the phasing out of nuclear power. President Sarkozy of France set up a commission headed by progressive economists to come up with an alternative way of measuring well-being (beyond GDP).9 Two distinct tendencies can be identified on the centre-right. One is the strategy of an orientation to global markets for environment technologies. Now, not only niche environmental suppliers, but also »global players« recognise green markets. This ecological approach to world markets aims at opening up export markets, without altering the functioning of global capitalism. The other (eco)conservative tendency is socalled »downsizing«. Conservatives such as the German intellectual and political advisor Meinhard Miegel are calling for a new model of affluence that draws a line under the »illusion of growth«.10 The point of departure here is the assumption, based on demographic and economic considerations, that we will have to come to terms with the ever more limited resources. We will have The indications are that "green markets" will be a key driver of economic development in the coming decades. Global jockeying for position for shares in this market is already well under way. Again, political conflicts will be about which interests are taken into consideration in a "green New Deal" and what social and political alliances emerge. From a Social Democratic standpoint the aim must be a "red-green New Deal".

The following guiding principles are therefore of central importance:

- Social Democracy is the most important political force standing up for a strong basis for industry and industrial services. The material restructuring of industrial production will be possible only by means of innovative research, engineering and well trained workers. »Green markets« have considerable potential for growth and job creation.
- In order to develop these markets a strategic policy and a partnership of industry, trade unions and state are necessary. The example of the German Renewable Energies Act shows that an intelligent strategic industrial policy is possible. Social Democrats must stay in close dialogue with industry and trade unions and thus, as a political force, develop a »competence for industrial organisation«.
- The environmental transition must be accomplished in a socially acceptable way. Where jobs are lost, alternatives must be created. The costs of, for example, improving the energy-efficiency of buildings must not be imposed on the tenants alone. Here, too, fair distribution of income but also of the dividend from increasing resource efficiency is an important condition for a social consensus on environmental restructuring. Increasing resource productivity in particular is to be understood as

to unhitch well-being from growth, since materialism and happiness are not synonymous. The conservative call for »moderation«, however, would »freeze« existing social inequalities – or even exacerbate them. According to Miegel labour must become cheaper and resource use more expensive, so that prices reflect »real scarcity«. And since a lower standard of material well-being would be based on more employment in services these must be provided at »modest wages«. Neither variant involves a social-environmental project which puts the interests of the broad working population centre-stage.

^{8.} See: www.greennewdealgroup.org.

^{9.} Joseph E. Stiglitz, Amartya Sen and Jean-Paul Fitoussi (2010): *Mismeasuring our lives*, New York.

^{10.} Meinhard Miegel (2010): Exit. Wohlstand ohne Wachstum, Berlin.



a means of combining international competitiveness and a high wage level.

- The environmental issue is an international challenge. Climate change can be addressed only on a global basis: the same applies to potential conflicts for limited natural resources. Against this background, the combination of »ecological industrial policy« and global social regulation could become the trademark of international Social Democracy.
- Social Democracy is not about lectures, renunciation and austerity; nor is it about wooing upper and middle class LOHAs (people adopting »lifestyles of health and sustainability«). The aim of environmental industrial policy is to enable all parts of society to enjoy a good life. It seeks a social alliance based on the understanding that workers are an important factor in environmental modernisation.





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