NO STABILIZATION OF THE EURO WITHOUT A GREEN NEW DEAL

DEPENDENCY ON FOSSIL FUELS AND NON-RENEWABLE RESOURCES IS A MAJOR FACTOR OF THE INSTABILITY OF SEVERAL EUROZONE COUNTRIES IN CRISIS
ExEcutivE Summary
introduction
EuropEan union (Eu-27)
EUROZONE
EU CITIZENS PAY THE BILL FOR AN UNSUSTAINABLE ECONOMIC MODEL
EUROZONE COUNTRIES IN FINANCIAL DIFFICULTIES
ROBUST EU-ECONOMIES
CENTRAL AND EASTERN EUROPEAN COUNTRIES (CEEC)
GREEN NEW DEAL
APPENDIX
EU member states have to spend more and more for imports of fossil fuels (oil, gas and coal) and other non-renewable raw materials. The global economic downturn in 2008/2009 has interrupted the continuing growth of import costs for a short period only. Soon, the member states will have to pay as much for their imports of fossil fuels and other non-renewable resources as they did before the crisis. The working paper at hand shows that it is not just companies, consumers and the environment that are suffering from the dependence on imports of fossil fuels and other non-renewable resources as they did before the crisis. Due to high net imports, some member states have accumulated external debt. As a consequence, those countries show an unsustainable trade deficit. Europe is lacking in natural resources, and therefore is strongly dependent on global imports. This increasing dependence on imports of fossil fuels and non-renewable resources raises serious concerns – especially in the view of a growing demand in emerging countries like China, India and Brazil, which will additionally amplify the ongoing trend of rising prices. The Green New Deal could make the majority of expensive imports obsolete, which in turn would reduce macroeconomic imbalances. As a result, less foreign debt would be accumulated and the Euro could be stabilized. Between October 2010 and September 2011, the 27 EU member states had to pay EUR 408 bn for their imports of fossil fuels and other finite raw materials. Revenues from the export of fossil fuels and other raw materials have already been deducted. In comparison: during the same period of time, the current account deficit of the EU-27 amounted to EUR 119 bn.

A look at the individual countries reveals that not one of the European states is exempt from this dependence. This is particularly true for the crisis countries Ireland, Italy, Spain, Portugal and Greece. They also register high current account deficits due to their imports of fossil energy sources and other non-renewable raw materials. The stability of the Euro is ultimately decided in Italy and Spain. Both countries would have succeeded to balance their current account with the recent efforts, if the import costs of fossil fuels had not significantly risen. Thus, these two countries have not just been living beyond their means, but - to be more precise – they have been living beyond their ecological means. Italy, which covers approximately three-quarters of its electricity consumption by burning oil, gas and coal, last year had to spend EUR 73 bn for the import of fossil fuels and other raw materials: which is over 50% more than in 2009 (EUR 47 bn). The current account deficit amounted to around EUR 58 bn during this period. A huge share of the new external debt is related to this import dependence. Even economies generating a current account surplus are not immune from being dependent on fossil energy sources and other raw materials. Germany registered a current account surplus amounting to EUR 141 bn in the period between October 2010 and September 2011. At the same time the country spent about EUR 108 bn for the import of fossil fuels and other raw materials. As one can expect further price advances in the future, these import costs certainly will increase. Recently, the current account surplus of Germany has slightly decreased. This in fact does not indicate a slow adjustment of the current account balances within the eurozone. The reduction of Germany’s surplus is likely to be the result of increased costs for the import of resources. The German current account surplus decreased by 45% from its all-time high of EUR 55 bn in the fourth quarter of 2007 to EUR 30 bn in the third quarter of 2011. The total import costs for resources developed conversely during the same time period by increasing 32% from EUR 22 bn to EUR 29 bn.

Without a Green New Deal – the Euro will not be rescued.

1 Latest available Eurostat data
By taking a closer look at the causes of the EU member states’ high current account deficits, an unambiguous yet alarming picture is revealed. Although the economy of many European countries is still deteriorating three years after the severe downturn, the expenditures for the import of fossil fuels and other non-renewable resources are rising steadily due to continuously increasing prices.

Figure 1 shows the development of the quarterly current account (blue line) and the net imports of selected product groups (columns). Oil (black), gas (red), coal (green) and other finite raw materials (purple) data was added up in order to visualize their proportion of the current account. From the data it becomes evident that a reduction of ap-

INTRODUCTION

Almost every day the media present a lack of competitiveness, excessive budget deficits and current account imbalances in the Euro area as reasons for the on-going crisis. All these indicators are central for the analysis of the economic situation, but the current debate has ignored one important aspect so far: the EU-countries’ dependence on imports of fossil fuels (oil, gas and coal) and other finite raw materials and their contribution to the debt dynamics in the EU.

The empirical findings of this working paper are based on the latest available data on the import of resources in September 2011 provided by Eurostat. To improve the readability of the figures, the scaling has been adjusted to the respective countries, thereby the ratio of net imports or exports to the respective current account as a meaningful indicator for the dependence on fossil energy sources becomes visible.

A current account deficit indicates that a country incurs debt to foreign creditors or – in rare cases – that a country sells its own assets (meaning a reduction of foreign exchange reserves). The working paper at hand will show the relative importance of fossil fuels and other finite resources on this national debt, by comparing net imports with current accounts.

In the following, the European Union and the eurozone will be analysed first. Subsequently, the individual situations of the current crisis countries Spain, Italy, Portugal, Greece and Ireland will be discussed in greater detail. This is followed by an analysis of the robust EU-economies, France and Germany, with a special focus on the causes of the Federal Republic’s current account surplus. Finally, Poland and Slovakia as two representatives of Central and Eastern European Countries will be examined.

To conclude, the results of the paper will be briefly summarised and approaches to an energy revolution that would reduce the EU countries’ dependence on imports will be identified.

Figure 1 current account² and net imports on a quarterly basis in bn. Euros

EUROPE HAS MISSED THE ENERGY TURNAROUND

² Eurostat data on current account of the EU-27 states are only starting from 2004, when ten new member states joined the European Union.
approximately one third of all imports of raw materials and energy sources could balance the current account of the EU-27. Without additional oil purchases, a large surplus could be achieved. The increase of import costs since 2009 itself was greater than the current account deficit of the EU-27.

In the twelve months from October 2010 to September 2011, the 27 EU-countries had to bear costs amounting to EUR 408 bn as a result of dependence on the import of fossil fuels and other non-renewable resources (revenues from the export of fossil fuels and other raw materials have already been deducted). In comparison: during the same period, the current account deficit of the EU-27 accumulated to EUR 119 bn.

Moreover, figure 1 shows how the recession, in 2008/09, induced a worldwide decrease in resource prices and thus a fall in costs for imports of fossil fuels and other finite raw materials. Likewise, in the third quarter of 2008 the costs of imports still amounted to EUR 113 bn, and then halved to just over EUR 56 bn in the second quarter of 2009.

However, since then, import costs have been increasing consistently, which is primarily due to the increase in prices. Figure 2 reveals that the level of imported quantities over the last ten years - apart from a breakdown in the second quarter of 2009 – have been consistently high. The price effect can be deducted from the considerable increase in spending for gas imports since the crisis in 2008/2009. Since the economic slump three years ago, spending on gas imports has been increasing by 90%, from EUR 13 bn in the third quarter of 2009 to EUR 24.5 bn in the first quarter of 2011. Within the same time period, the imported quantity increased by approximately 27%, from 54 mn tons to 69 mn tons.

If the analytical focus is concentrated solely on the costs of oil imports in recent years, an even more threatening picture emerges. The synchronized trend of the current account deficit and the spending on oil imports (figure 3A) is self-explanatory, however the massive increase in absolute numbers in particular reveals the extent of possible savings. The impact of rising oil prices on increasing oil import costs can be seen in figure 3B.

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1 Eurostat data on current account of the EU-27 states are only starting from 2004, when ten new member states joined the European Union.
The current account deficit of the 17 Euro-countries of approximately EUR 49 bn accumulated from October 2010 to September 2011, is significantly lower than for the entire EU thanks to the export strength of specific member states, such as Germany, the Netherlands and Finland. In the same period, expenditures for the import of fossil fuels and other non-renewable resources amounted to an oppressive EUR 354 bn, which is approximately seven times the aforementioned figure. A large share of this consumption is accumulated through the resource-hungry industrialized countries of Germany, France and Italy.

Figure 4 illustrates how the expenditures in the eurozone – equivalent to the 27 EU member states – for the import of fossil fuels and other finite resources decreased as a consequence of the recession, but then shortly after began to rise again. The second quarter of 2009 marks the lowest point with approximately EUR 50 bn. In the third quarter of 2011, the import costs already totalled almost EUR 93 bn, thereby reaching approximately the pre-crisis level - even though the economy in the Euro area was still struggling.

While the amount of imported oil, gas and coal has remained largely consistent over the last ten years (see figure 5), the costs of imports increased strongly. The eurozone countries have not succeeded in significantly reducing their dependence on fossil fuels. Due to increasing prices in recent years, import costs have risen considerably, increasing the external debt of many of the Euro countries. This has contributed to the instability of the monetary union.
EU CITIZENS PAY THE BILL FOR AN UNSUSTAINABLE ECONOMIC MODEL

Even now, the EU member states’ costs for the import of fossil fuels and other finite resources per capita run up to an average of EUR 812 per year (October 2010 until September 2011). Figure 6 shows that Germany as a heavily industrialized country is clearly above the EU average with EUR 1,327 per person in this period. The data is certainly influenced by diverging industrial activities in the individual countries and also by cross-border trade. Nevertheless, it gives a first impression of how expensive our unsustainable economic model has become.

According to the recent calculations4 of the International Energy Agency IEA, in 2012 European consumers will have to spend unprecedented sums on energy: eleven percent of their disposable income will be spent solely on heating, lighting, cooking and transportation. This has risen from the nine percent of 2009 and the historical average of six to seven percent. The rapid rise in energy costs in recent years will continue in the face of dwindling resources. This development will particularly affect lower and middle income groups, as they will have to spend a disproportionately large part of their disposable income on energy. Further cost increases will thus have a serious impact on their quality of life, since they have to compensate their increased spending on energy by reducing consumption of other goods.

4 Cf. Financial Times dated from 03/23/2012: “Soaring oil prices risk recession”
EUROZONE COUNTRIES IN FINANCIAL DIFFICULTIES

The eurozone countries Portugal, Italy, Greece, Ireland and Spain, which have been severely hit by the eurocrisis, are particularly affected from expensive imports of fossil fuels and other non-renewable resources. The continuing growth of import costs of oil and gas in recent years - apart from the decline in 2008/09 - has specifically caused the alarmingly high level of current account deficits. So far, the countries in crisis have failed to prepare their economic model for more expensive energy resources and to initialize an energy turnaround. Although the economic performance of the debt countries is still well below the pre-crisis level, their expenditure on the import of fossil fuels and other non-renewable raw materials has almost reached the level of 2007. This import dependency explains to a large part their new external net borrowings.

Hence, the claim that the aforementioned highly indebted countries have lived „beyond their means“ requires clarification: they have lived in particular beyond their ecological means – and continue to do so. The austerity measures for the reorganization of public and private households, which are ongoing in all countries affected by the crisis, are totally insufficient to lead to success. In order to solve the problem of the indebted countries, reforms to reduce the energy needs of their unsustainable economic model are necessary.

However, the dependency on energy and resource imports also poses a problem for the country.

Due to specific factors, which will be explained in the following country analysis, the data for Greece does not allow to draw valid conclusions.

<table>
<thead>
<tr>
<th></th>
<th>Current account deficit in third quarter 2011 in EUR bn</th>
<th>Increase in raw material import costs between first quarter 2009 and third quarter 2011 in EUR bn</th>
<th>Share of increase in raw material import costs since first quarter 2009 and third quarter 2011 in current account deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>6,39</td>
<td>4,03</td>
<td>63%</td>
</tr>
<tr>
<td>Italy</td>
<td>8,21</td>
<td>4,63</td>
<td>56%</td>
</tr>
<tr>
<td>Greece¹</td>
<td>2,31</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Portugal</td>
<td>1,63</td>
<td>0,63</td>
<td>39%</td>
</tr>
<tr>
<td>France</td>
<td>8,67</td>
<td>5,66</td>
<td>65%</td>
</tr>
</tbody>
</table>

¹ Due to specific factors, the resource imports of Greece have been decreasing since the breakout of the financial and economic crisis. The data therefore is not meaningful.
The situation in Spain is especially dramatic. Similar to the development in the eurozone, the costs of importing fossil fuels decreased for a short time due to recession. Since then, Spain was able to keep its spending on gas imports on a rather constant level. However, the current account is still significantly negative.

The rising costs of oil imports, which in the past three years increased considerably from EUR 3.4 bn (Q1 2009) to EUR 7.2 bn (Q3 2011), is responsible for this development. As the Spanish economy grew by only 0.7% of GDP in 2011, the additional expenditure for the import of oil is an extra burden for the already highly indebted country. Without the increase in costs for the import of fossil fuels and other non-renewable raw materials, the current account (EUR 6.3 bn in the third quarter of 2011) would be practically balanced and Spain would not have to incur any more debts. Therefore, the increased oil import costs are crucial when explaining why the rebalancing of the current account has not been achieved until now.

The continuing dependence on fossil energy sources is also depicted in figure 8. The import quantities of oil and gas have been declining slightly in the last ten years, only coal and other nonrenewable raw materials are imported in observable smaller amounts since the outbreak of the crisis in 2008/2009.
Italy’s economic model also lacks sustainability. The energy hunger of Italy has been growing rapidly: the oil import costs have increased from EUR 19 bn (2009) to over EUR 31 bn (Oct. 2010 to Sept. 2011). This means these costs have been rising by almost double the amount since the crisis broke out, although the economy only grew by 0.2% in 2011. In the same time period, the import of gas caused additional costs of EUR 22 bn.

Since the beginning of 2009, the increased expenditures on imports of fossil fuels and other nonrenewable raw materials alone equalled the amount of the current account deficit in the third quarter of 2011 of approximately EUR 8 bn.

That Italy is one of the resource-hungry heavily industrialized nations is also reflected in the remarkably high import costs of other non-renewable raw materials. These costs added up to EUR 3.6 bn (Q3 2011), which corresponds to 43% of the Italian current account deficit.

The simultaneous increase in costs, import quantities of fossil fuels and non-renewable resources have also risen since early 2009 (see figure 10). Additional gas imports of 11.2mn. tons (third quarter of 2011) raised the total amount of imported fossil fuels and finite resources by 32%, from 33.9mn. tons (fourth quarter 2008) to 44.8mn. tons.
For Portugal a similar picture to Spain and Italy is revealed, although far less dramatic. However, even in this case the trend is unambiguous: after a decline in prices due to the financial and economic crisis, the import costs have started to rise significantly.

The import costs of fossil fuels and other finite resources over a one year period have amounted to EUR 7.3 bn (Oct. 2010 to Sept. 2011) EUR 5 bn during the crisis (2009). Despite the considerable reductions, the Portuguese current account deficit remains constant due to import expenses.

Figure 12 clearly reveals that Portugal is in a deep recession: while import costs have been rising, the imported quantities of fossil fuels and other finite resources decreased due to lower demand. Consequently, the price increases consumed the savings made due to import reductions.

**Figure 11**
Current account and net imports (−) / net exports (+) on a quarterly basis in bn. Euros

**Figure 12**
Net imports (−) / net exports (+) on a quarterly basis in mn. tons
In Greece, over the course of the last year both current account deficit and costs for oil imports have been declining. This does not mean however, that Greece is on a path to sustainability. The recent decline merely reflects the ongoing recession accompanied by inactive production facilities, increasing poverty and high levels of unemployment. The poor state of the economy in Greece is also reflected in declining import volumes (see figure 14). Several years of recession have led to a decline of domestic oil consumption both by households and companies.

The oil imports of Greece will further decrease in 2012, but for a different reason: as Greece is in arrears with its energy bills, some suppliers have cut back on deliveries. Thus, Greece currently has to consume its reserves. For now, the large storage facilities in Piraeus, as an important port can absorb the demand. Nonetheless, shortages emerge due to the suspension of deliveries by Iran, which thereby pre-empted the embargo imposed by the EU. Iran had previously covered 7% of the Greek oil imports in 2010 and around a quarter in 2011. Recently, on 10 April 2012 the Iranian state-controlled oil company ELPE has stopped oil shipments to Greece. Emerging shortages shall be compensated by imports from Russia, Saudi Arabia and North Africa. Therefore, the discussed low level of imports of Greece is only a snapshot, influenced by special factors. Once the economy has recovered – which is not expected before mid-2013 – it is anticipated that the import of fossil fuels and other finite resources will increase again. This will then entail new costs and consequently, new debt.
IRELAND

Since the outbreak of the financial and economic crisis, Ireland has managed to keep its import costs for fossil fuels reasonably stable. This was partly due to weaker domestic demand (see figure 16). Compared to the fourth quarter of 2008 (2.1mn. tons), Ireland imported 29% less oil in the third quarter of 2011 (1.5mn. tons).

However, an overall decline of imports of resources cannot be observed. This would be a genuine feature of a sustainable economic model. At least, the constant import costs have ensured that Ireland currently generates current account surpluses. It should be noted however, that this must be seen in the context of declining domestic demand in the wake of the crisis.

![Stable Import Costs, Current Account Turns Into the Positive](image1)

**FIGURE 15**
current account and net imports (-) / net exports (+) on a quarterly basis in bn. Euros

![Import Quantities of Resources Remain High](image2)

**FIGURE 16**
net imports on a quarterly basis in mn. tons
ROBUST EU-ECONOMIES

Stable economies equally face problems with the rising costs of fossil fuel imports. Compared to the debt countries, until now, Germany and France were not severely affected by the Euro crisis. Nonetheless, they suffer from the increasing energy costs.
Apart from the decrease of import costs as a result of the financial and economic crisis in 2008/2009, France has to spend more money for fossil fuels and other finite raw materials every year as the rest of Europe. In accordance with the increase in import costs, the current account of France turned negative in late 2004 and has been unable to recover since. While the expenses for the import of gas and coal have been somewhat stable since 2009, the costs of oil imports more than doubled between the first quarter of 2009 (EUR 5.6 bn) and the third quarter of 2011 (EUR 12.2 bn).

Within twelve months from October 2010 to September 2011, total costs for the net import of fossil fuels and other finite raw materials accumulated to approximately EUR 60 bn. In the same period, the current account deficit amounted to more than EUR 48 bn. The import of fossil fuels and other finite raw materials decreases the current account of France considerably. In the long run, the growing current account deficit of such a big Euro-country as France is an alarming signal for the stability of the common currency.

Next to the increase in prices, the strong dependency on fossil fuels and non-renewable resources is also due to the fact that France was not able to reduce its import quantities (in total 146mn. tons from October 2010 to September 2011) compared to the level before the crisis (141mn. tons in 2007). See also figure 18.
Heavily industrialised Germany, poor in natural resources itself, relies strongly on imports. From October 2010 to September 2011, the former export champion achieved a current account surplus of nearly EUR 141 bn. Nevertheless, Germany paid more than EUR 108 bn for the import of fossil fuels and other finite resources which is already included in the current account surplus. The share of Germany in the total EU-imports of fossil fuels and other raw materials is 26%, which is higher than the country’s share in the EU’s GDP (about 20%). Since further increase in prices can be expected for the future, the costs for imports will consequently rise.

German need for energy knows no bounds. Between October 2010 and September 2011, Germany imported 262mn. tons of fossil fuels and finite raw materials compared to 265mn. tons in 2002. Indeed, the share of renewable energies is enlarging, but the turnaround in dependency on imports could not be attained so far. At best, the efforts in boosting renewable energies reduced the need to import fossil fuels. The gains in industrial efficiency as well as the savings through building restoration were entirely offset by growing levels of production. The trend reversal can only be achieved if less fossil fuels and non-renewable raw materials are imported.

Recently, the current account surplus of Germany has slightly decreased. This in fact does not indicate a slow adjustment of the current account balances within the eurozone. The reduction of Germany’s surplus is likely to be the result of increased costs for the import of resources. The German current account surplus decreased by 45% from its all-time high of EUR 55 bn in the fourth quarter of 2007 to EUR 30 bn in the third quarter of 2011. The total import costs for resources went in the opposite direction: during the same time period, they increased by 32% from EUR 22 bn to EUR 29 bn.

Whilst the expenses for the import of gas and coal remained reasonably stable during the last years, the costs of oil imports increased continuously: from EUR 7.5 bn (second quarter of 2009) to EUR 17.3 bn (third quarter of 2011). Since the imported quantity of oil remained nearly unchanged (see also figure 20), the rise in costs has to be attributed to the increase in prices.

The considerable augmentation of the costs of fossil fuels, in addition to the import costs of other non-renewable raw materials continue to cause problems in Germany; the expenses for the import of finite resources more than doubled between 2002 and 2011.

The rise in world market prices causes an increase in resource productivity that is unable to compensate the higher demand of the industry driven by economic growth. High saving rates and low investment quotas also act as a cause of the German current account surplus. Given the de-
mographic change of German society, a propensity to save is unsurprising. The widening of social inequality is an additional reason for the increase in the saving’s rate. However, the saved money is not invested in Germany but abroad without having certainty that these foreign investments and loans will generate positive returns.

In the long run, the low interest in investments constrains the creation of jobs in future technologies. In other words: at present the energy bill can still be financed, however without structural reforms and a rebuilding of energy production facilities, this will prove a more challenging task in the future.

**GERMANY: RAW MATERIAL IMPORT COSTS DOUBLED**

**FIGURE 21**
expenses for net imports (-) / revenues of net exports (+) in Euros per capita

**GERMANY: LOW INVESTMENT RATE REDUCES OPPORTUNITIES IN THE FUTURE**

**FIGURE 22**
Germany: gross investment in percentage of GDP
With a view to the Central and Eastern European Countries (CEEC), the data clearly shows the effects of their unsustainable economic model. Among the CEEC, Poland and Slovakia are the two states most drastically increasing the import costs of fossil fuels.
Here the similar progression of the current account deficit and the import expenses is remarkable. After a temporary decline, the costs of oil imports within one year increased significantly from EUR 7.2 bn in 2009 to EUR 12.2 bn between October 2010 and September 2011. Moreover, the import costs of other finite raw materials have exceeded the pre-crisis level and reached EUR 600 mn (third quarter of 2011). This represents 13% of the current account deficit.

The deficit has largely been caused by an increase in prices. Remarkably, the import quantities of oil and non-renewable resources remained mainly unchanged since the beginning of 2009 (see also figure 24).

Furthermore, Poland annually exports more hard coal despite this resource policy eroding the ambitions of climate protection. Although Poland could benefit from a less oil dependent economy, the Polish government vetoed measures in the European Council of environment ministers for stricter climate protection in early March 2012.
Slovakia is based on a similar unsustainable economic model as Poland. However, Slovakia has been successful in keeping its import quantities on the lower crisis-level of 2008/09 and was recently able to realise a current account surplus.

Although the current account recently turned positive, it must be noted that the import costs of fossil fuels are constantly increasing since 2008/09. The country had to increase spending, particularly for gas and coal (lignite as well as hard coal), while at the same time the costs of oil imports have reeched their former all-time high.

Between October 2010 and September 2011, the import costs of fossil fuels and other finite raw materials added up to EUR 4.9 bn. Within the last twelve months, the current account deficit of EUR 900 mn has increased more than five fold.

The fact that the resource productivity in the Slovakian industry is relatively poor can be seen when comparing the expenses for the import of fossil fuels and other limited resources per capita (see figure 6, page 9). Among the CEECs, Slovakia along with Slovenia demonstrates the highest expenditure per capita. However, the fall in import quantities (see figure 26) of coal, gas and finite raw materials since the financial and economic crisis erupted is a positive signal. This reduction can be reached despite an economic growth of 3.3% of GDP in 2011.

**Figure 25**

Increasing import costs of fossil energy carriers

**Figure 26**

Import quantities slightly declining, dependency on oil undamped.
This working paper reveals that a substantial part of the EU’s current account deficit can be attributed to the import of fossil fuels and non-renewable raw materials. If we manage to forego a notable share of these imports by rebuilding our energy supply, the current account deficits of the debt countries would be smaller and the eurozone would be stabilized considerably.

Admittedly, a successful reduction of the import dependency through realignments could result in similar patterns of current account surpluses and deficits. Moreover, an appreciation of the Euro could lead to new current account deficits of already indebted countries. In this case, the problem of internal imbalances would not be solved. However, realignments depend on several effects and are by no means sure to happen.

Nevertheless, it is certain that in a situation of increasing prices, consistently high import quantities constitute a danger for the economy as well as for the environment and for consumers. This problem can only be solved by overcoming the dependency on fossil fuels and other finite raw materials. One way to reduce this dependency is offered by the Green New Deal, providing a strong package of measures for the ecological and social transformation of our economy. The Green New Deal is based on three pillars: firstly, the regulation of financial markets should ensure that these markets serve sustainable economic development and should also restrict excessive speculation. Secondly, the Green New Deal encompasses strong investments in climate protection, education and social justice. Market incentives like ecological taxation, cut-back of unsustainable subsidies, social and environmental regulations (such as prescriptive limits for the CO2-emission of cars), stimulation of green demand (e.g. through public procurement) and a sustainable industrial policy with introducing subsidies and research and development schemes (like the feed in law for renewable energy) create future jobs and activate new economic development.

The third pillar is the renewal of the social balance between the poor and the rich. The energy turnaround is an important issue on the way towards 100% energy supply through renewable energies. It helps to breach the malign spiral of constantly increasing debt and environmental pollution. In order to avoid expensive imports of fuels, the Green New Deal has to pursue several objectives at the same time: investment in renewable energies, higher energy efficiency and more energy sufficiency.

First of all, energy has to be extracted from renewable energy sources that cause low greenhouse gas emissions. For the future, the development of wind, photovoltaic and solar power plants is essential as well as geothermal energy and the sustainable use of biomass. In addition, the utilization of energy has to be organized more efficiently through the energetic restoration of buildings, fuel-saving cars and resource-saving production processes in general. In the short and medium term, the need for oil imports cannot be overcome entirely, because oil is required as a material base for the production of numerous industrial goods and consumer products. However, through recycling management and renewable resources, industry would be able to replace this finite raw materials. Likewise, industrial agriculture has to overcome its high use of fossil fuels. Furthermore, a rethinking is necessary: the target of our economic activity must not be the increase in production volume ad infinitum but also the limitation of unnecessary consumption. In this context, the so-called planned
obsolescence of consumer goods needs to be curbed. This unsustainable marketing technique makes for electronic equipment break down after a certain period of time so that new devices can be sold. Finally, considerable energy savings could be made through changing our consumption patterns. In the long term, this will not be possible without a reduction of individual motorcar traffic. For this reason, coherent mobility concepts focus on public transportation.

The social and ecological transformation of the economy can only be successful, if it is supported by society as a whole. The price increase of oil, gas and other non-renewable resources also raises new questions on the distribution of wealth. Hence, we have to reduce social inequalities in society through fair taxes and strong public goods, such as education and health. Socially vulnerable groups must not be the losers in the ecological transformation. Through stable long-term energy prices, the Green New Deal will disencumber the low and middle income groups in particular, who have to spend a disproportionately high share of their income for energy. Therefore, insulation of apartments and affordable public transport represents a crucial contribution to more social justice.

The EU has already laid the groundwork for a more ecological and socially responsible economy. In 2010, the European Union adopted its new guiding strategy „Europe 2020“. Besides economic growth, education and eradication of poverty, the strategy identifies the reduction of greenhouse gas emissions by at least 20% until 2020 compared with 1990 as a target of the European Union. Thus, the 2020 strategy is significantly more balanced than the Lisbon Strategy, which had previously failed. Nevertheless, the EU 2020 strategy is less ambitious than the Green New Deal. Almost all promises are non-binding and under-funded. The European Union should not stop halfway when putting efforts into an ecological and social transformation. In order to achieve this aim, the Europe 2020 strategy must make Europe the driving force of the green revolution in the 21st century. Thus, establishing a mandatory EU target of 30% of reduction in greenhouse gas emissions by 2020 would be an important step to protect the environment and increase innovation. Simultaneously, it would create new jobs: in 2005, the renewable energy sector directly and indirectly employed nearly 1.4mn. people in the European Union. Raising the EU’s reduction target from 20% to 30% until 2020 would create more than 2mn. additional jobs.

APPENDIX

Notice: To improve the readability of the figures, the scaling has been adjusted to the respective countries. Thereby the ratio of net imports (-) or net exports (+) to the respective current account as a meaningful indicator for the dependence on fossil energy sources becomes visible.