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### IRENA and RuDEA - Germany Promotes Renewable Energy and Energy Efficiency Globally

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# DGAPaktuell

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## IRENA and RuDEA—Germany Promotes Renewable Energy and Energy Efficiency Globally

The fight against climate change and a tightening competition for energy sources pose global challenges for our energy supply. Germany has propagated renewable energy and energy efficiency as elements of its foreign energy policy in order to address these challenges. Two organizations are currently in the focus of attention: The International Renewable Energy Agency (IRENA), founded at the end of January 2009 at German instigation, is currently in the setup-process. The Russian-German Energy Agency (RuDEA), aimed at improving the energy efficiency in Russia, is planned to launch in mid-July. The complementary strategies of IRENA and RuDEA were the topics of two expert discussions conducted by DGAP's Foreign Energy Policy Program: Economies worldwide shall become independent of fossil energy sources by increasing the share of renewable energy and by raising energy efficiency. Additionally, these measures shall secure the supply of fossil energy sources during the decades of transition, especially with the relatively climate-friendly natural gas.

Global Challenges for Energy Supply—Climate Change and Tightened Competition

States all over the world face increasing challenges to secure the supply of energy. Thus, recent findings show that climate change is progressing at a faster rate than expected. Sea level, for instance, has risen faster in the past years than even the high estimates from the 1990 assessment report of the Intergovernmental Panel on Climate Change (IPCC) of the United Nations had predicted. The efforts that have to be made in order to limit global warming increase year by year—and they primarily concern the energy sector. For it is of paramount importance to reduce the CO<sub>2</sub> emissions stemming from the combustion of fossil fuels as they are posing the main trigger for climate change.

As an additional challenge to climate change, competition for the remaining reserves of fossil energy sources, especially oil and gas, has tightened. The hunger for energy in China, India and other emerging economies is huge and steadily increasing. In 2008, non-OECD countries for the first time consumed more primary energy than the industrialized countries of the OECD—and thus they are more and more competing with each other for the access to fossil energy sources. Since reserves in OECD countries are rapidly depleting, these countries are continuously becoming more dependent of the oil and gas reserves of the politically volatile Middle East. The world's poorest countries, in turn, are being severely hit in their economic development by the consequences of climate change, to which they are exposed through no fault of their own, and powerless as well as by the competition-driven increase and volatility in prices for fossil energy sources.



These challenges make it imperative to shift the global energy supply and provide it independently of fossil energy sources. For the transition which will last for decades, however, the supply with these fossil energy sources has to be secured, too. Besides their own interest in addressing these challenges successfully, industrialized countries have to take the biggest share in responsibility to manage the paradigm shift in the global energy supply. This is due to the fact that the increasing concentration of CO<sub>2</sub> in the atmosphere has been mainly caused by the usage of fossil energy sources in these countries since the early days of industrialization. In addition, it is them who dispose of the necessary technological and business competency, the experience as well as the financial capabilities to work towards that change.

Renewable energy, energy efficiency and saving measures are considered to be the seminal answers to the above-mentioned challenges. In Germany, national aid has considerably pushed their domestic development in recent years. Additionally, the Federal Government has started to increasingly propagate them as elements of German foreign energy policy, for instance by the foundation of the International Renewable Energy Agency (IRENA).

International Renewable Energy Agency (IRENA)

IRENA is the first international organization whose foundation traces back to a German initiative. This initiative was firstly taken by member of the Bundestag Hermann Scheer, and has since then been promoted by the Ministry for the Environment, the Ministry for Economic Cooperation and Development, and the Foreign Office. Alongside other candidates, Germany, with the city of Bonn, had also applied for the future seat of IRENA's headquarters. A Solomonic solution was reached at IRENA's second session at the end of June 2009: The organization will have its seat in Abu Dhabi, an Innovation and Technology Centre will be set up in Bonn while a Liaison Office to the UN's and other international organizations in the energy sector such as UNIDO, IAEA and OPEC will be located

in Vienna. Hélène Pelosse from the French Ministry for Ecology and Energy was elected first Secretary General of IRENA. She took over from Karsten Sach, Director with the German Ministry for Environment, who was heading the organization during its formation.

At the end of January 2009, IRENA was founded deliberately outside of the United Nations in order to develop the organization in a quick manner and without restrictions by the bureaucratic hurdles of the UN. A future integration into the UN framework is nevertheless envisaged. Until the end of June, 136 states have already joined the new organization, among them many European and developing countries. Finally, the U.S., which seems to be overcoming its aversion against multilateral engagement, became member, too. This gives hope for the upcoming climate negotiations in Copenhagen in December 2009, since the U.S. has not yet been involved in the Kyoto process. Some important states like China, Russia and Brazil are, however, still missing in IRENA. IRENA will take up its work when at least 25 states will have ratified the foundation document, which is expected to take place already in 2010.

The aim of IRENA is to promote on a global scale the use of renewable energy and also, to a lesser extent, the increase in energy efficiency. These measures shall make the global economy independent of fossil energy sources in the mid- to long-term perspective, reduce the import dependency of many countries, combat energy poverty and climate change, and thus help increase energy security worldwide. Additionally, the promotion of renewable energy shall lead to the creation of new industrial branches and jobs. IRENA, with an estimated annual budget of 25 million Dollars and 120 employees, is slated to provide advice to member countries on the extension of renewable energy, and to support them to build the corresponding capacities. It is also expected to raise additional financial means for specific projects, since obligatory and voluntary financial contributions by member countries will only be sufficient for the basic funding of the organization.

In an interdependent world, the promotion of security of energy supply in distant regions of the world by an organization such as IRENA also increases the security in Germany and the EU. Main keywords in this context are conflicts about the distribution of resources between states as well as flows of refugees induced by energy poverty and climate change, which are to be avoided. The promotion of and the shift towards renewable energy worldwide is, therefore, in Germany's and the EU's interest in (energy supply) security.

#### Russia's Energy Inefficiency as Risk

By promoting renewable energy and energy efficiency, the foreign energy policy of Germany and the EU can also find answers for another risk to energy supply and climate—the energy inefficiency of the Russian economy. Russia is the major exporter of oil and natural gas for Germany and for the EU. But at the same time, Russia is one of the most energy intense economies in the world: Russia spends 0.42 kilograms of oil equivalent per Dollar of the gross domestic product, whereas the German economy with a factor of 0.14 requires only a third of energy input for same value of output. In addition, commentators have regularly expressed concerns that Russia could lack sufficient amounts of gas for export due to underinvestment in new producing areas and in transport infrastructure.

According to a September 2008 World Bank report, Russia has the potential to reduce its energy consumption by 45% by making use of various energy efficiency measures and could, thus, annually save up to 240 billion cubic metres (bcm) of natural gas as well as considerable amounts of other energy sources. For comparison: In 2007, Russia exported 141 bcm of natural gas to the EU, of which 34.5 bcm went to Germany. The World Bank estimates that the necessary investment costs of 320 billion Dollars would amortize within just four years.

#### Russian-German Energy Agency (RuDEA)

The Russian leadership, too, has realized the problem of its country's energy inefficiency. President Dmitri Medvedev recently announced the target to reduce energy consumption in Russia by 40% until 2020 in relation to 2007. Speaking in Yekaterinburg in March 2008, German Foreign Minister Frank-Walter Steinmeier instigated the concept of a modernization partnership between Russia and Germany. As one result, the Russian Government invited Germany in November 2008 to help set up an energy agency designed after the German model, which will increase energy efficiency in Russia. Already in mid-July 2009, the Russian-German Energy Agency shall be founded during the German-Russian intergovernmental consultations in Munich. RuDEA shall have its headquarters in Moscow.

RuDEA's stakeholders will be the Energy Carbon Fund on the Russian side with 60%, which was set up in 2000 by the then electricity monopolist RAO EES, and the German Energy Agency (dena) with 40%, behind which stand several German Ministries and financial institutions. Alongside these two institutions, the Russian Energy Ministry and the German Ministry for the Economy, too, will have a seat in the supervisory board. In addition, it is intended to set up an advisory board consisting of thirty Russian and German companies and further ministries. It is especially this linkage of private and public actors, which the organizers regard as decisive for the future success of RuDEA. The organization's main activities will comprise advice to companies and state structures as well as pilot projects in various sectors such as rehabilitation of buildings, energy transport, associated gas, or industrial production. Campaigns shall raise the awareness for energy efficiency in economic activities and people's everyday lives, while analyses shall be conducted on innovative technologies. To a lesser extent renewable energy sources shall be promoted. Additionally, RuDEA is slated to acquire public and private funds for specific projects, because RuDEA, similarly to IRENA, will receive only its basic funding by the Energy Carbon Fund and dena. At a later stage,

more than half of the turnover shall stem from private funding for projects.

Obviously, both sides can benefit from RuDEA's work and an increase in energy efficiency in Russia: Not only can Germany and Russia massively reduce their CO<sub>2</sub> emissions and combat climate change. Russia, by decreasing its domestic consumption, can also free capacities for the export of natural gas—to its own economic benefit and at the same time to an increased security of supply in Germany and the EU. The application of German experience and technology can also help develop new markets for the German economy and simultaneously modernize the Russian economy a cooperation to the benefit of all parties.



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»Energy Efficiency for Russia-Potentials of the Russian-German Energy Agency RuDEA« 26 May 2009, 11.30-13.00h

»IRENA—Renewable Energy As an Element of German Foreign Policy?« 3 June 2009, 8.30-10.00h

Organizer: Program Foreign Energy Policy, DGAP