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# **Preparation Paper/Study Guide:**

# Sustainable Energy for All (SE4ALL)

Simulation of a Sustainable Energy for All Forum

"Energy in the 21. Century"

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#### A short history of SE4AII

Sustainable Energy for All (SE4ALL) is a global initiative led by the Secretary-General of the United Nations, Ban Ki-moon in response to resolution 65/151. It was launched to coincide with the designation of 2012 as the International Year of Sustainable Energy for All by the UN General Assembly in December 2010. The initiative brings together three pillars of sustainable development: economic, social and environmental, and therefore defines three interlinked objectives to be achieved by 2030:

- Providing universal access to modern energy services
- Doubling the global rate of improvement in energy efficiency
- Doubling the share of renewable energy in the global energy mix

In September 2011, to guide the work carried out under the SE4ALL initiative, Secretary-General Ban Kimoon appointed a High-level Group on Sustainable Energy for All, comprising global leaders from around the world.

The UN Secretary General's High Level Group on SE4ALL is co-chaired by two prominent figures: Charles Holliday, Chairman of Bank of America, and Kandeh Yumkella, Chair of UN-Energy and Director-General of the UN Industrial Development Organization. High level representatives from the private sector, government, UN/intergovernmental organizations and civil society work together in this group to mobilize a broad range of stakeholders who can catalyze commitments and form partnerships in support of SE4ALL.

The governance structure has been established in three tiers to guide, oversee and support the SE4ALL objectives: The Advisory Board and Executive Committee will guide the SE4ALL initiative. A Chief Executive will direct the Global Facilitation Team that will catalyze the implementation of actions, projects and programs to be undertaken by a range of partners. These will be supported by Regional and Thematic Hubs. The global network of the SE4ALL initiative will be supported by partner organizations from governments, international and national organizations, businesses and civil society organizations.

National Governments supporting the SE4ALL initiative as well need to design and implement integrated country actions that strategically transform their energy systems. So far, more than 60 Governments from developing countries have joined the SE4ALL initiative and have expressed interest in advancing SE4ALL.

As the Sustainable Energy for All Forum is intended to become the annual meeting place for the extended global energy community, it aims to :

- Report and assess progress on the Sustainable Energy for All initiative;
- Inspire actions and solutions by sharing knowledge, innovation and success stories across the world;
- Present ideas and mechanisms to catalyze finance at the scale required to achieve Sustainable Energy for All;
- Grow the broader movement of global stakeholders to advance the United Nations Decade of Sustainable Energy for All.

#### **Activities & Commitments**

#### Global Action Agenda

The Global Action Agenda developed in 2012 by the High-Level Group on Sustainable Energy for All shall guide efforts undertaken to achieve the initiative's objectives. It contains 11 Action Areas, grouped into the categories sectoral and enabling, and provides a framework for identifying high impact opportunities that will catalyze change and prompt innovation. The seven sectoral Action Areas address both power generation and the principle sectors of energy consumption. They include: Modern Cooking Appliances & Fuels; Distributed Electricity Solutions; Grid Infrastructure & Supply Efficiency; Large Scale Renewable Power; Industrial & Agricultural Processes; Transportation; and Buildings & Appliances. The four enabling Action Areas characterize cross-cutting mechanisms designed to support effective sectoral action and address existing obstacles. They include: Energy Planning & Policies; Business Model & Technology Innovation; Finance & Risk Management; Capacity Building & Knowledge Sharing.

#### International year of Sustainable Energy for All

During 2012, numerous activities and initiatives were undertaken in support of SE4ALL. The roll-out of the International Year took place at the World Future Energy Summit held in Abu Dhabi, United Arab Emirates from 16-19 January 2012.

At Rio+20, sustainable energy for all was a consistent, high-profile theme. Several high-level side events on the issue were organized. Significant commitments to action in support of the achievement of sustainable energy for all were announced and were included in the online Conference registry of voluntary commitments. The Conference outcome document, "The Future We Want" also takes note of the SE4ALL initiative and the determination of stakeholders to make sustainable energy for all a reality.

#### International decade on Sustainable Energy for All

In December 2012, the UN General Assembly declared 2014-2024 as the Decade of Sustainable Energy for All. Resolution 67/215 calls upon Member States to galvanize efforts to make universal access to sustainable modern energy services a priority. The resolution stresses the need to improve access to reliable, affordable, economically-viable, socially-acceptable and environmentally-sound energy services and resources for sustainable development.

#### SE4ALL 2013-2015 Strategic Work Program

In 2012, the High Level Group on SE4ALL jointly developed a global strategy and concrete agenda for action to reach the three objectives of SE4AII.

The 3-year Strategic Work Program of the SE4ALL initiative was released in April 2013, detailing the milestones to be accomplished, the catalytic and facilitation activities to achieve these milestones and the manner in which the SE4ALL initiative will be organized from 2013 to 2015: According to the SE4ALL 2013-2015 Strategic Work Program, Regional SE4ALL Hubs to support energy access shall be established in at least three regions: Africa, Asia and Latin America. These shall be set up in coordination with regional development banks and other regional organizations.

The SE4ALL 2013-2015 Strategic Work Program also foresees the establishment and operationalisation of two thematic hubs: an Energy Efficiency Hub in Copenhagen and IRENA acting as the SE4ALL Renewable Energy Hub to promote and accelerate renewable energy deployment.

The SE4ALL 2013-2015 Strategic Work Program organizes all implementing activities within the next three years into six workstreams: Country Action, Business Action & Investment, Global Advocacy and Stakeholder Engagement, Communications & Outreach, Knowledge Management, and Monitoring & Reporting.

#### Sustainable Energy 4 all Forum 2014

The First Annual Sustainable Energy for All Forum, officially launched the United Nations Decade of Sustainable Energy for All 2014-2024, as declared by the UN General Assembly including the initial two-year focus on Women, Children and Health. The first Sustainable Energy for All (SE4All) took place from 4-6 June 2014 at the UN Headquarters New York, US. The Forum's 1000 participants assessed progress on sustainable energy since the UN Conference on Sustainable Development (Rio+20) in June 2012, showcased successes, shared best practices, presented new commitments, and catalyzed action to help shape the global energy debate for the next decade. Several topics were addressed and organized in parallel panel discussions. The following is a summary of the ideas that emerged during the Forum.

During the Forum several panels convened to address how civil society organizations and stakeholders can engage in advocacy campaigns under the UN Decade of Sustainable Energy for All. Thematically, the panels addressed two general issues: reasons for engaging civil society, and ways for women, youth and business partners to participate in the SE4ALL process.

#### Catalyzing investment through innovative business models

Under this theme, speakers noted the SE4ALL Energy Access Committee's recommendation to pursue offgrid, decentralized, bottom-up energy solutions and smaller-scale technologies. Participants called for more support from the public sector, which could take the form of, inter alia: reducing risks for small- and mediumscale renewable energy projects, such as solar; and reducing costs to operators, in order to engage smaller providers and ensure distributive access. It was noted that fuel economy policies have already improved fuel efficiency.

Sharing knowledge and experiences, developing capacity

Panels discussed several specific initiatives and reports, including the Energy Access Practitioner Network, the 2014 Poor People's Energy Outlook Report, the SE4ALL Capacity Building Hub called "Specialized Training, Education and Experiential Resources (STEER)," and the Renewable Energy Policy Network for the 21st Century's (REN21) Global Renewables 2014 Global Status Report.

Recurrent themes were the importance of empowering women, and the linkages between energy access and health, water, food production, and transport. Several participants emphasized the need for a standalone Sustainable Development Goal (SDG) on securing sustainable energy for all, and said targets on renewables and energy efficiency need to be more ambitious than current ones in order to keep global temperature increases below 2°C.

#### Accelerating Country Action

Governments, regional development banks, international organizations and other stakeholders described different country-level initiatives. They noted that sustainable energy is not another aid problem, but is about investments and business models, and public policy is needed to incentivize the process. Government initiatives discussed included:

- the Tonga Energy Roadmap;
- · promoting access to energy in Tanzania;
- Nicaragua's progress in renewable energy generation and efficiency;
- Ghana's work on access to energy and challenges with off-grid electrification;
- energy infrastructure development in Rwanda;
- Senegal's energy strategy and rural electrification programmes;
- Guinea's investment prospectus, which involves expanding the electricity network, using mini-grids, and expanding off-grid services to remote areas;
- Bangladesh's Investment Prospectus Framework and Vision 2021 "electricity for all" plan; and
- Guatemala's strategy on clean cookstoves and clean cooking solutions.

Donors and the private sector called for: more education; the use of development assistance to leverage public and private funds for energy development; increased access to finance and the inclusion of local financial institutions; innovative finance; development of outcome monitoring; the right kind of business model; risk mitigation; and making projects commercially viable.

#### Catalyzing Large Scale Financing and Investment for Sustainable Energy for All

This panel examined how to bridge the gap between the needs of investors and the required US\$600-800 billion to achieve the SE4ALL targets. Participants set forth a number of recommendations, including:

- targeting the growth areas of proceeds bonds, municipal green bonds, project bonds, and assetbacked securities;
- focusing on four thematic areas that need attention to close the funding gap: green bonds; development finance institution private risk sharing; aggregation; and insurance;
- instituting favorable tax treatment to make renewable energy more competitive;
- using local commercial banks that can play an aggregating role and scale up energy efficiency projects;
- integrating markets, energy sources, and public and private efforts; and
- developing a global programme to advance credit worthiness of utilities.

## Doubling the Share of Renewables in the Global Energy Mix

Several speakers stressed that this target is achievable, noting the reduction in solar costs by 70-80% in recent years, and that costs have come down enough for subsidies to also come down. Others drew attention to constraints or conditions: developed countries will need regulation to enable the shift to renewables; political leadership at the highest level is needed to reduce financing risk; and while technology is "taking care of itself," the high cost of financing remains a constraint.

#### Doubling the Global Rate of Improvement in Energy Efficiency

Participants considered ways for both private enterprises and governments to support energy efficiency. They noted that private enterprises need to see a higher rate of return from investing in energy efficiency projects, before they will take an interest in providing financing. On the role of governments, speakers highlighted urban planning for renewable energy, enforcing building codes for energy efficiency and encouraging companies to create jobs in green energy technology. Participants noted many governments' lack of financial capacity to incentivize the private sector.

Several areas for public-private collaboration were suggested, including: a combination of credits provided by private enterprises, with subsidies provided by state institutions; education for both sectors; and cooperation to reduce gas flaring. One mentioned the importance of partnerships among governments.

#### Catalyzing Bottom-up Financing and Investment for Sustainable Energy for All

This panel discussed reaching the poor and improving sustainable energy for all at the "bottom of the pyramid." Participants stressed that different categories of poor people have different finance needs. Drawing from concrete country initiatives and projects, panelists identified the need for:

- rural banks and finance for rural entrepreneurs;
- government to make energy more affordable, accessible and reliable;
- engagement with the private sector;
- more innovative financing solutions, such as mobile phone and pay-as-you-go technology for finance;
- communities to organize themselves, for example through integrated grids that communities own and manage;
- upfront capital investments and strong leadership to support countries in special situations;
- measures to accelerate renewable energy use through incentives such as feed-in tariffs for geothermal and photovoltaic energy;
- attention to cultural and policy requirements for each type of energy within a larger "energy ecosystem"; and
- cross-sectoral policy conversations enabling ministers of energy, health and agriculture to develop energy policy together.

#### REmap 2030 Launch

The REmap 2030, a road map to doubling the share of renewable energy in the world's energy mix by 2030 was launched. According to the road map 36% renewable energy target is both ambitious and realistic, and REmap 2030 provides an operational framework to reach the target.

## Current diffusion of technologies and future development

### Renewable Energy

Over the last 40 years, the contribution of renewables to world Total Primary Energy Supply (TPES) had more or less been stable around 12.5%. Although solid biofuels (mainly fuel wood) are by far the largest renewable energy source, representing three quarters of global renewables supply, recent dramatic developments in solar and wind due to supporting policies have started to change the energy renewables mix, especially for electricity production. The steep growth of solar and wind compensated the decline in share of hydroelectricity, and therefore renewables have kept their rank of third largest contributor to global electricity production. They accounted for 21% of world generation in 2012, after coal (40%) and slightly behind gas (22.5%), but ahead of nuclear (10.9%) and oil (5.0%).

China remains the largest wind power market, with 20 GW of new capacity. Germany installed more than 5 GW of wind capacity, while US capacity additions bounced back from the very low levels of 2013 to almost 5 GW in 2014. Relatively high (but declining) costs for offshore wind and delays in the build-up of grid connections have resulted in delays to projects in some countries or the cutting of capacity targets (e.g. Germany), though other countries have responded by boosting their support to the industry (e.g. Japan, Korea and China). Solar photovoltaic (PV) expanded strongly in Asia, particularly in China and Japan, the Japanese expansion being supported by generous feed-in tariffs. Lower oil prices proved to be a challenge

for other forms of renewable energy, including biofuels in transport and renewable heat, as the latter competes directly with natural gas heating (the price of which is still, in many cases, linked to the oil price). Carbon capture and storage (CCS) achieved an important milestone in 2014, with Boundary Dam unit 3 (net capacity of 120 megawatts) in Canada becoming the first commercial power plant to come online with CO2 capture. The 22 large-scale CCS projects either in operation or under construction have a collective CO2 capture capacity of around 40 million tonnes (Mt) per year. The present pace of progress, however, falls short of that needed in order to achieve the pace and scale of CCS deployment necessary to achieve a 2 °C pathway.

Renewable energy investment was flat in 2014 at \$270 billion, with new capacity of 128 GW installed, representing almost half of total capacity additions. Wind power accounted for 37% and solar for almost another third. The first commercial power plant with CO2 capture came online in 2014. Nuclear capacity of 74 GW was under construction at the end of 2014.

Renewable technologies are becoming increasingly cost competitive in a number of countries and circumstances, but public support schemes are still required to support deployment in many others.

#### Oil

Even if its share decreased from 46% in 1973 to 31% in 2013, oil still accounts for the largest share in total primary energy supply followed by coal (29%) and natural gas (21%). If oil has been widely displaced by natural gas and nuclear in the electricity production (dropping from 25% to 5% of electricity production in 40 years), oil still represents more than 92% of the energy consumption of the transport sector.

In 2013, the major producers of crude oil were Saudi Arabia, the Russian Federation, the United States, the People's Republic of China, Canada and Kuwait. Together they accounted for half of global oil production. The ranking changes when looking at the oil consumers with the United States being by far the largest oil consumer followed by the People's Republic of China, Japan, India and the Russian Federation.

An important change in the energy sector from 2014 to 2015 has been the rapid drop in world oil prices and, to a lesser extent, natural gas and coal prices. After a prolonged period of high and relatively stable prices, oil dropped from over \$100 per barrel in mid-2014 to below \$50 in early-2015.

#### Coal

Coal is sometimes called the fuel of the past. But in fact coal is also the fuel of today with global coal production 2.5 times larger in 2013 than in 1973, coal still accounts for 29% of the world total energy supply just second behind oil (31%); its share is even much higher (40%) in terms of electricity production due to large coal consuming countries such as the People's Republic of China and India, with respectively (57%) and (71%) of their coal consumed for power generation.

The world production of coal is dominated by the People's Republic of China with 45.5% of the global production; the United States is the second largest producer (11.6%) followed by India, Indonesia and Australia; the five countries together account for more than three quarters of the global coal production.

Coal had been the fastest growing of the fossil fuels over the past decade, driven by Chinese demand. However, over the next 20 years coal is seen as the slowest growing fossil fuel, growing by 0.8% a year, marginally slower than oil. The change is driven by three factors: moderating and less energy-intensive growth in China; the impact of regulation and policy on the use of coal in both the US and China; and the plentiful supplies of gas helping to squeeze coal out from power generation.

#### **Natural Gas**

In 2013, the world natural gas production reached a new record of almost 3,500 Billion cubic metres. Since 1973, the consumption of natural gas has almost been multiplied by 3. There are various reasons which explain this dramatic increase: large discoveries in many countries, development of long gas line connections, development of LNG plants and carriers, environment concerns, development of gas combined cycles for electricity generation, etc.

If many countries have now developed a gas infrastructure, compared to 1973, to feed power plants, industry, households, etc., the world consumption is still vastly dominated by a few countries: United States, the Russian Federation, the Islamic Republic of Iran, the People's Republic of China, Japan and Canada accounting for half of the world consumption.

Demand for natural gas will grow fastest of the fossil fuels over the period to 2035, increasing by 1.9% a year, led by demand from Asia. Half the increased demand will be met by rising conventional gas production, primarily in Russia and the Middle East, and about a half from shale gas. By 2035, North America, which currently accounts for almost all global shale gas supply, will still produce around three quarters of the total.

#### **Nuclear Energy**

Nuclear power is the second-largest source of low-carbon electricity generation worldwide, after hydropower. Nearly all new nuclear construction in recent years has taken place in price-regulated markets or in markets where government-owned entities build, own and operate the plants. China continues to lead in new capacity additions, with 28 GW under construction at the end of 2014, while plants with a combined capacity of 46 GW are under construction in Russia, India, Korea, United States and several other countries. Japan has begun the necessary process to permit the restart of some of its nuclear capacity.

#### Greenhouse Gases

Greenhouse-gas emissions from the energy sector represent roughly two-thirds of all anthropogenic greenhouse-gas emissions and CO2 emissions from the sector have risen over the past century to ever higher levels. Effective action in the energy sector is, consequentially, essential to tackling the climate change problem.

Despite a political will to reduce greenhouse gases emissions, and despite energy efficiency and cleaner fuels programs, global  $CO_2$  emissions from fuel combustion continue to increase, reaching 31,700 Mt $CO_2$  in 2012, a 51.3% increase compared to 1990. Nearly two-thirds of global emissions in 2012 originated in just ten countries, the People's Republic of China (26%), the United States (16%), India (6%), the Russian Federation (5%), Japan, Germany, Korea, Canada, the Islamic Republic of Iran and Saudi Arabia. Amongst the fuels, coal accounted for the largest share of emissions - due to its heavy carbon content per unit of energy released - followed by oil and natural gas.

#### BP Energy Outlook 2035

- Population growth and increases in income per person are the key drivers behind growing demand for energy. By 2035, the world's population is projected to reach 8.7 billion, which means an additional 1.6 billion people will need energy.
- Primary energy consumption increases by 37% between 2013 and 2035, with growth averaging 1.4% p.a.. Virtually all (96%) of the projected growth is in the non-OECD, with energy consumption growing at 2.2% p.a.. OECD energy consumption, by contrast, grows at just 0.1% p.a. over the whole period and is actually falling from 2030.
- By 2035 all the fossil fuel shares are clustered around 26-28% with no single dominant fuel a first since the Industrial Revolution. Fossil fuels in aggregate lose share but remain the dominant form of energy in 2035 with a share of 81%, down from 86% in 2013.
- The US, Russia and Saudi Arabia supply over a third of global liquids output to 2035. OPEC's share of the global liquids market in 2035 is 40%, the same as in 2013.
- The US becomes energy self-sufficient by 2021. And by 2035 could be exporting 9% of its total energy supply. Meanwhile, China overtakes the EU as the world's largest importing country/region by 2025.
- By 2035, over 70% of carbon emissions are produced from the non-OECD, although per capita emissions in the non-OECD are still less than half the OECD level. Total carbon emissions increase by 25%.

# **Bloc Positions**

Bloc positions differ in terms of how determined countries or country groups foster the transition towards renewable energies. This becomes manifested in the share of renewables in the energy mix, comprehensive programs for the future, financing projects related to renewable energy and the international action for fostering renewable energies.

One major player regarding energy issues are the **Unites States of America.** It is undeniable that oil continues to be the most significant energy source, accounting for 36% of total primary energy supply (TPES) in 2013. The United States are the third-largest producer of crude oil, behind Saudi Arabia and the Russian Federation. Another defining feature of the energy landscape in the United States has been the

unexpected rise in shale gas production and the new-found abundance of inexpensive natural gas. Though shale gas (alongside other unconventional sources of tight gas and coalbed methane) has been produced for several decades, its production only started to expand after 2005, reversing the previous decline in gas production. Natural gas production is projected to continue to increase over the period to 2040. Almost all of this increase is the result of the projected growth in shale gas production. Climate and greenhouse (GHG) gas policy remains an unsettled and disputed area of energy policy between the executive and legislative branches of government. In 2009, at the negotiations of the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen, the President committed the United States to the goal of reducing GHG emissions in the range of 17% from 2005 levels by 2020 in conformity with any legislation. The Climate Action Plan (CAP), released in June 2013, sets forth a series of executive branch actions that, with Congress unlikely to enact major climate legislation, uses executive powers under existing laws to reduce emissions. In June 2014, the EPA proposed the Clean Power Plan to cut carbon pollution from existing power plants. Energy efficiency policies have the potential to boost economic growth while reducing energy demand. In this regard, the United States has made good progress, and improvements are expected to continue over the medium term, as energy performance standards for appliances and equipment and for new buildings are implemented.

A rising power has entered the stage recently and is changing the energy market in the last decade tremendously. The People's Republic of China is the world's largest producer of coal and one of the major producers of oil. The enormous energy demand in the country led to the situation that China surpassed the United States to become the biggest emitter of greenhouse gases in 2007. However, the country's efforts to eradicate poverty, expand economic development and solve its air pollution problems have driven the country to invest heavily in clean energy. Therefore, investments in renewable energy has risen steadily over the last decade, and with US\$ 54 billion in investments in renewable energy sources in 2013 alone, the People's Republic of China is now the world leader in clean energy investments. Hydroelectric (hydro) accounted for 85% of total renewable power generation in China in 2013, a share that has fallen as other forms of power generation have been rolled out. Wind power is growing significantly and in 2013 China had 77 gigawatts-electric (GWe) of installed wind capacity. As a result, wind now accounts for nearly a quarter of total renewable power generation in 2013 in China. China has the largest solar thermal capacity in the world, accounting for two-thirds of the total global capacity of 270 gigawatts-thermal (GWth) in 2012.

Like China, the European Union is also making a considerable effort towards more renewable energy. Energy policy in the European Union aims to address the three objectives of economic competitiveness, security of supply and environmental sustainability. In 2008, sustainability - notably, mitigating climate change - was the key driver for EU energy policies. However, the context for EU energy policy has changed dramatically. Today, concerns of energy security and industrial competitiveness have become more pressing. In 2009, as part of the 2020 climate and energy package, the European Union adopted three unilateral targets for 2020: 1) reduce its greenhouse gases (GHG) emissions by 20% in 2020 below 1990 levels. 2) increase the share of renewable energies to 20% in its gross final energy consumption and to 10% in transport, and 3) reduce its total primary energy consumption by 20% in 2020, relative to the 2007 projections of energy consumption in 2020. Increased electricity generation by renewables and reduced electricity demand, arising in part from energy efficiency policies and the economic crisis, has reduced the need for allowances to meet the carbon emissions limits set under the EU-Emissions Trading Scheme (EU ETS). However, it has to be mentioned that there are significant differences between the countries of the European Union. Some are actively fostering renewable energies (e.g. Sweden, Austria), while some rely heavily on non-renewables like coal (e.g. Poland). In several issues, the EU furthermore cannot be said to hold a "bloc position", as economic and strategic interests between individual countries vary. Thus, general tendencies in the EU regarding renewables do exist, but delegates will have to play close attention to the national interest of each member state. Delegates are encouraged to take a close look at the energy mix and the production of energy related technology (not only renewables, but also nuclear technology etc.) of their respective country instead of simply endorsing positions held by EU institutions.

The **Russian Federation** is the second largest producer of oil and investments in the upstream oil and gas sector have enabled Russia to maintain its position as one of the most important energy players globally, continuing its essential role in global energy supply. Crude oil and especially condensate production have reached historical highs against the backdrop of increasing global oil prices, higher investment and technology upgrades. Renewable energy in Russia mainly consists of hydroelectric energy. 16% of Russia's electricity is generated from hydropower, and less than 1% is generated from all other renewable energy sources combined. Even though Russia exports mainly to European and CIS countries, the recent years and months have brought signs of a reorientation towards China as an energy trade partner. The two countries have signed a 30-year, \$400bn (£237bn) deal for Gazprom to deliver Russian gas to China. This strategic move might also be interpreted as an attempt of Russia to reduce its dependency on Europe as an export market.

**Developing countries** have gained on significance at the last UNFCC conferences where they emphasized the importance of supporting and financing developing countries in order for them to ensure energy security through the use of renewable energy. But not just energy security was an issue, but also the existential threat for some countries, especially for small islands, caused by the climate change, that needs to be tackled urgently.

#### Points to be addressed in the resolution

- Can renewable energy be an efficient source in providing sustainable energy? What about other energy sources such as nuclear energy?
- How can sustainable energy become universally feasible and affordable? Which actions and commitments should all countries make in order to achieve the three main goals set by the SE4All Forum?
- How can social, economic and environmental dimensions of sustainability be integrated?
- How can sustainable energy be achieved on the transnational level, the national level and local level?
- Which support should the developed parts of the world agree upon in order to provide financial and non-financial aid for less developed countries?
- How do recent developments like the decline of the oil price and the shale gas boom influence the transition towards sustainable energy?

#### Further reading

http://www.se4all.org

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