



G20 Themes #9

Energy Sustainability

What does Energy Sustainability mean?

According to the G20, energy systems should be “well-functioning, open, competitive, efficient, stable and transparent energy markets, fostering more effective and inclusive global energy architecture to better reflect the changing realities of the world’s energy landscape, and shaping an affordable, reliable, sustainable and low greenhouse gas (GHG) emissions energy future while utilizing energy sources and technologies.”¹

Ultimately, energy sustainability will mean a full phase out of fossil fuels, as oil, gas, and, coal from already-producing fields and mines would already exceed the internationally agreed well-below 2°C limit, while the world’s already-producing oil and gas projects would

alone exceed a 1.5°C limit. Consequently, aligning energy activities with climate commitments suggests that no new fossil fuel extraction or transportation infrastructure should be built.² Further research indicates that, no new coal or gas-fired power plants can be constructed beyond 2017 without a high risk of exceeding the 2°C warming limit.³

G20 commitment

In 2016, the G20 committed member countries to “join the Paris Agreement [on Climate Change] as soon as our national procedures allow.” The 2015 Paris Agreement committed the G20 and other world leaders to a goal of limiting global warming to well-below 2°C, while aiming to limit warming to below 1.5°C. The meaningful implementation of this agreement would

G20 Principles on Energy Collaboration (of 16 November 2014)

Sharing a common understanding that the international energy architecture needs to reflect better the changing realities of the world energy landscape, we, the leaders of the G20 countries, agree to work together to:

- 1 Ensure access to affordable and reliable energy for all.
- 2 Make international energy institutions more representative and inclusive of emerging and developing economies.
- 3 Encourage and facilitate well-functioning, open, competitive, efficient, stable and transparent energy markets that promote energy trade and investment.
- 4 Encourage and facilitate the collection and dissemination of high quality energy data and analysis.
- 5 Enhance energy security through dialogue and cooperation on issues such as emergency response measures.
- 6 Rationalise and phase out inefficient fossil fuel subsidies that encourage wasteful consumption, over the medium term, while being conscious of the necessity to provide targeted support for the poor.
- 7 Support sustainable growth and development, consistent with our climate activities and commitments, including by promoting cost-effective energy efficiency, renewables and clean energy.
- 8 Encourage and facilitate the design, development, demonstration and widespread deployment of innovative energy technologies, including clean energy technologies.
- 9 Enhance coordination between international energy institutions and minimise duplication where appropriate.

mean a fundamental shift in energy systems from fossil fuels to renewable energy.

The G20 also committed to further aligning work “with the universal implementation of the 2030 Agenda for Sustainable Development,” which established 17 Sustainable Development Goals (SDGs) for the world community to achieve by the year 2030. Sustainable Development Goal #7 would “ensure universal access to affordable, reliable and modern energy services”; “increase substantially the share of renewable energy in the global energy mix”; and “double the global rate of improvement in energy efficiency.”⁴

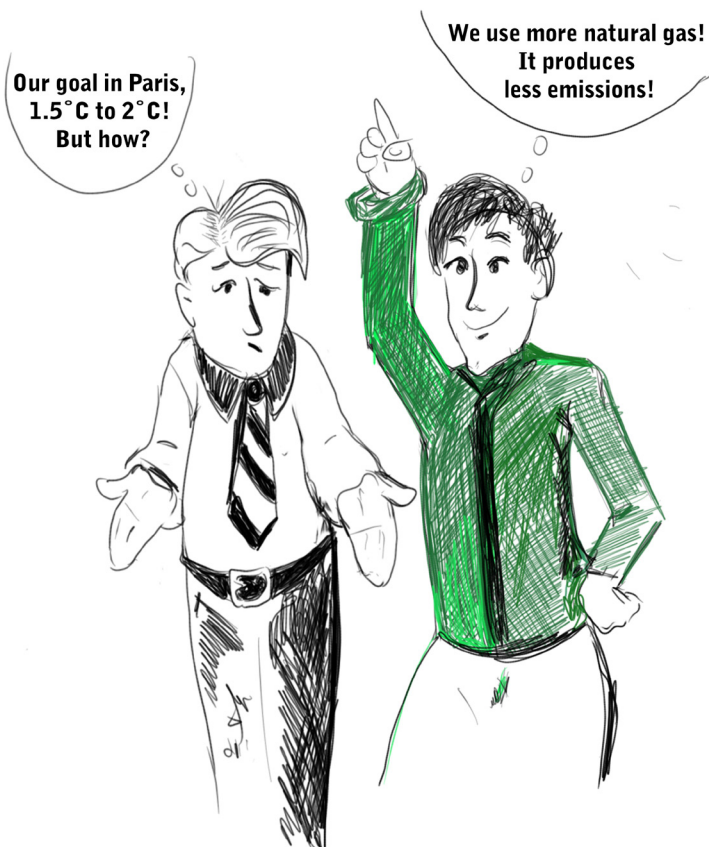
At the 2014 Australian G20 Summit, Leaders also endorsed the G20 Principles on Energy Collaboration,⁵ which reflect a collective G20 approach to energy sustainability (See box above.)

Limitations regarding goal/commitment

An overarching limitation regarding the G20’s commitments to “energy sustainability” is that there continues to be a clear tension between economic sustainability and environmental and social sustainability in the way that the G20 talks about energy. The continued focus on economic sustainability does not equate to environmental and social sustainability.

It is critical for the G20 to achieve the goals laid out in the Paris Agreement on Climate Change because its member nations emit 77% of all greenhouse gas emissions. Perhaps the biggest limitation in implementing the goals of Paris Agreement is the G20’s statement that “natural gas is a less emission-intensive fossil fuel” and that the G20 “will enhance collaboration on solutions that promote natural gas extraction, transportation, and processing.” This is contradictory to meaningful action to limit global warming to “well-below 2°C” as laid out in the Paris Agreement.

Likewise, the G20 must do its part to deliver on the Sustainable Development Goals, in particular ensuring universal energy access for all. While the 2016 communiqué states that the G20 will “endeavor to



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work with Sub-Saharan and Asia-Pacific countries to improve universal access to affordable, reliable, clean, sustainable and modern energy services,” the only indications of how this might be achieved are contained in a voluntary action plan that is limited in scope.⁶

The G20’s commitments on energy – via the Paris Agreement and Sustainable Development Goals – are also at odds with other G20 initiatives regarding infrastructure, which accounts for 60% of greenhouse gas emissions. For example, the 2016 G20 Summit launched a Global Infrastructure Connectivity Alliance to strengthen and link the infrastructure master plans in each region of the world. Since the 2016 G20 Communiqué expressed the Leaders commitment to diversifying energy sources (rather than relying on renewables), this Alliance could lock-in carbon-intensive technology for generations.

The Alliance and the associated Global Infrastructure Hub (created in the 2014 G20 Summit process) are both primarily focused on scaling up infrastructure investment, especially through large, cross-border, public-private partnerships (PPPs) in four sectors: energy, transport, water, and Information Communication Technology (ICT). The G20 downplays

the risks of mega-PPPs. The G20 should revamp its Alliance in order to scale up the types of infrastructure investment which will advance progress toward sustainable development and climate goals.

Progress/regression over time

While discussions on energy sustainability have been long-standing at the G20, an Energy Sustainability Working Group was first established under the Russian G20 Presidency in 2013. Energy-related outcomes in the 2013 G20 Leaders' Declaration focused on a mix of elements aiming at improving the efficient and transparent functioning of energy markets, and improving energy sustainability. As noted above, the 2014 Australian G20 Summit endorsed problematic G20 Principles on Energy Collaboration. But the Summit also endorsed the Action Plan for Voluntary Collaboration on Energy Efficiency, which represents a step forward.

At the 2015 G20 Summit in Turkey, Leaders endorsed the G20 Energy Access Action Plan,⁷ focusing on electricity access in Sub-Saharan Africa, notable for its linkage to the UN Sustainable Energy for All initiative⁸ and its emphasis on achieving universal energy access, and highlighting the potential contribution of renewable energy in achieving that goal.

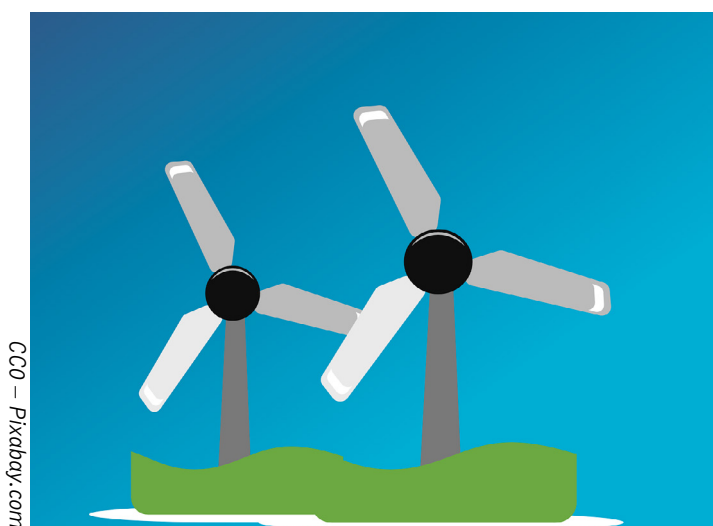
The endorsement of the Paris Agreement at the Chinese G20 was clearly a step forward for energy sustainability in the face of climate change, though the language on natural gas and the lack of progress on fossil fuel subsidy phase out was disappointing. One additional small step forward was the explicit inclusion of

renewable energy and energy efficiency under the newly-launched G20 Initiative on Supporting Industrialization in Africa and LDCs.

Future desired direction

To demonstrate serious commitment to the issue of energy sustainability, G20 Leaders should:

- Clearly outline how the G20 intends to meet the goals of the 2015 Paris Agreement on Climate Change and the Sustainable Development Goals. In particular, G20 Leaders should emphasize the need to shift away from fossil fuels in the processes of global energy production and use. This would signal the magnitude of transformation required in the energy system to deliver true energy sustainability and indicate to investors that major economies are committed to facilitating this shift.
- Facilitate the above shift in an equitable manner, with developed countries which have emitted the bulk of historic emissions, leading the way not only in their own practice, but also in their assistance to developing countries, as called for by the UN Framework Convention on Climate Change (UNFCCC). Such assistance should help ensure that developing countries are not paying more for renewable energies than for imported fossil fuels or exploiting their own reserves.
- Revise its approach to energy to ensure alignment with the Sustainable Development Goals. In particular, G20 leaders should consistently reflect a holistic definition of sustainability, including environmental and social aspects. Further, G20 leaders should be clear about how they intend to support Sustainable Development Goal #7, including ensuring universal access to affordable, reliable and modern energy services; requiring the share of renewable energy globally to increase substantially; and doubling the rate of energy efficiency improvement by 2030.⁹
- Explicitly recognize the limitations and risks of mega-projects and Public-Private Partnerships (PPPs) in delivering sustainable outcomes and revamp the Global Infrastructure Connectivity Alliance accordingly. The mandate and business plan of the Global Infrastructure Hub should also be revised to ensure that sustainability is a basic



requirement of all projects. (See Fundamental #6 on Infrastructure and Public Private Partnerships)

Some input by engagement groups

- The Civil 20 in China urged the phase out of fossil fuel subsidies and, in line with the Sustainable Development Goals, and increase in the share of the renewables and improvements in energy efficiency and conservation.¹⁰ In Turkey, the C20 called on G20 leaders to “make energy efficiency and renewable energy an infrastructure investment priority”, to “shift investments from unsustainable mega projects to decentralised, local infrastructure projects”, phase out fossil fuel subsidies by 2020, and to lead in supporting reliable and clean energy access for all by 2030.¹¹
- The International Chamber of Commerce CEO G20 Advisory Group issued “Six steps to energy sustainability and security” (June 2016)¹² which encourages G20 leaders to keep all energy source options open to reduce dependency on any one form.
- The Business 20 in China recognized the need for significant mobilization of finance into the renewable energy and energy efficiency industries to achieve the goals of the Paris Agreement. In line with this, they recommended the G20 design incentives for, and lower the financing costs of, green investments, and recommended the G20 establish standards for green investment.¹³
- The Think Tank 20 in Turkey highlighted “the importance of developing a coherent long term strategy to incentivize a more robust sustainability-oriented infrastructure framework”, in line with the need to green scaled-up investment in infrastructure, including energy infrastructure.¹⁴

¹ G20 Leaders’ s Hangzhou Communiqué, par. 23, available at: <http://www.cfr.org/international-finance/g20-leaders-hangzhou-communique/p38282>

² Muttit, G. “The Sky’s Limit: Why the Paris climate goals require a managed decline of fossil fuel production.” Oil Change International. September, 2016. <http://priceofoil.org/2016/09/22/the-skys-limit-report>

³ Pfeiffer, A. et al. “The ‘2°C capital stock’ for electricity generation: Committed cumulative carbon emissions from the electricity generation sector and the transition to a green economy.” Applied Energy, 179. October 2016, available at: <http://www.sciencedirect.com/science/article/pii/S0306261916302495>

⁴ see footnote 1

⁵ G20 Principles on Energy Collaboration, November 2014, Annex to the Brisbane Leaders Communiqué, available at: http://www.g20australia.org/official_resources/g20_principles_energy_collaboration.html

⁶ Enhancing Energy Access in Asia and the Pacific: Key Challenges and G20 Voluntary Collaboration Action Plan. <https://ec.europa.eu/energy/sites/ener/files/documents/Enhancing%20Energy%20Access%20in%20Asia%20and%20the%20Pacific%20Key%20Challenges%20and%20G20%20Voluntary%20Collaboration%20Action%20Plan.pdf>

⁷ See here: <http://www.mofa.go.jp/files/000111173.pdf>

⁸ See here: <http://www.se4all.org/>

⁹ United Nations. “Transforming Our World: The 2030 agenda for sustainable development.” September 2015. <https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>

¹⁰ http://www.g20.org/English/Documents/Current/201607/t20160706_2885.html

¹¹ http://c20turkey.org/uploads/C20%20Turkey%20Communiqué_FINAL_16.09.15.pdf

¹² <http://www.iccwbo.org/News/Articles/2016/Six-steps-to-energy-sustainability-and-security/>

¹³ <http://en.b20-china.org/documents/doc/1/2>

¹⁴ <http://t20turkey.org/images/pdf/The%20G20%20Antalya%20Communiqué%20The%20main%20achievements%20and%20the%20way%20forward.pdf>

Imprint

Published by: Heinrich-Böll-Stiftung e.V.
Editing: Nancy Alexander/Heike Löschmann
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Place of publication: www.boell.de
Date of publication: November 2016

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