

SDG 7

Peoples' power or how to ensure access to affordable, reliable, sustainable and modern energy for all

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Energy is one of humanity's most basic needs and is rightly recognized in the 2030 Agenda as central to human progress. The global hunger for power seems insatiable and many countries are pursuing power sector development at any cost. The cost will thus be borne by the next generation. The existing mindset to achieve SDG 7, also in relation to the other SDGs, is inadequate. SDG 7 targets

- I to ensure universal access to affordable, reliable and modern energy services,
- I to increase substantially the share of renewable energy in the global energy mix, and
- I to double the global rate of improvement in energy efficiency

will require investment beyond business as usual by households, government at all levels, and businesses large and small. While the role of business is crucial and can be constructive, vested corporate interests are also working to undermine this goal.

Linkages to other SDGs

It is evident that sustainable economic development is not possible without energy provision. SDG 7 is directly relevant to SDG 1 (poverty eradication) and SDG 13 (climate action). But it is highly relevant also to SDGs 2, 8, 10 and 12: food security, economic growth, reducing inequalities and sustainable production and consumption. Indeed, energy is relevant to three quarters of the 169 SDG targets.

An energy revolution?

The limited experience we have shows that the required energy transformation, bringing affordable, clean power to all, can only be successful with a high degree of civil engagement, indeed co-ownership, by ordinary people, households and local communities. This reflects a significant break from the past. Until recently, highly centralized energy systems were super-imposed on national economies, regardless of

the local implications. The investments were large, be they led by the State or by commercial business, and the risks and profits were similarly high.

Today, we witness a paradigm shift with access to energy being a bottom-of-the pyramid business opportunity. Local communities, especially in Africa and Asia, realize they cannot afford to wait for the national grid to arrive. They establish small local energy services companies instead. Thanks to affordable clean technologies this dream becomes reality. For governments, the challenge in the coming decade will be to close the gap between local off-grid development and national grid-based systems in order to bring power to all people.

Globally, an energy transformation is underway which is as much about access to clean energy for all, as about peoples' power versus big business power. The energy transformation is intricately linked to alleviating poverty, by increasing productivity,

climate protection and food security. Gradually, the global energy mix is changing, moving away from biomass-based energy for the poor and fossil fuel-based energy for the rich towards cleaner renewable technologies and greatly improved efficiency. Rapid growth in renewable electricity capacity is not yet matched by a decline in investment in fossil fuel electricity and indeed in its share of the grid.

The State of Electricity Access Report (SEAR) 2017 summarizes well the international expert perspective on how countries can create “a conducive environment for a transformative electricity access roll out, how clean energy fits into the picture, and how emerging and innovative service delivery models can accelerate progress on meeting the SDG goals”.¹ The reference to energy services, as opposed to the ‘simple’ provision of energy is both an acknowledgment of the growing importance of technology, and of the need for energy efficiency and demand-side management in the provision of electricity. According to an analysis by Ernst and Young, today relatively little profit is made in the generation of electricity, the profits are found in energy services.² This reality is challenging energy industries, often State-owned, with several being forced to restructure or seek bankruptcy protection. As we will show below, they will not go without a fight.

What then is the role of business? The relationship of business to SDG 7 is not a simple good versus evil story, but one with many shades of grey. Before highlighting some of the more problematic dimensions of business in relation to SDG 7, it is important to acknowledge that a growing number of entrepreneurs are committed to providing access to clean energy and positively impacting on social development. These industry champions are a bellwether of the future energy system.

Energy poverty

An estimated 1 billion people do not have access to electricity, be it dirty or clean. Until recently, these people had two options: biomass, especially charcoal, or in the case of small business owners the use of polluting generators. Neither option is sustainable.

If one were to believe the world’s biggest (climate) polluters, the road to ending this energy ‘poverty’ is paved with coal. On behalf of US coal giant Peabody, public relations giant Burson-Marsteller designed and executed a massive public relations campaign championing coal as the saviour of the world’s poor. Timed to influence the Brisbane – Australia G20 Summit 2014 and (developing) country preparations for the Paris Climate Change Conference in 2015, the campaign “Advanced Energy for Life” was designed to deflect attention from coal as the single largest climate pollutant to the issue of energy poverty,³ the cure for which being cheap coal-generated electricity for those in the developing world presently without access to energy.

What Peabody did not say when launching the campaign is that it had a major interest in Australian coal and climate policy and was battling for survival. In 2015, it laid off staff and reduced production of metallurgical coal in Australia, its stock price fell by 90 percent. Once the world’s largest coal company, Peabody Energy had to file for Chapter 11 bankruptcy protection in April 2016.⁴ Investors are at the same time responding to a divestment campaign, akin to the one against the Apartheid regime in South Africa, to pull money out of conventional fossil resources.

Despite a recent push by the Trump Administration to remove pollution and other controls affecting the coal industry in the USA, most experts agree coal is

1 World Bank (2017), p. vii.

2 Ernst & Young (2014) and PWC (2014).

3 At the time of writing (May 2017), the campaign has closed, as has its website, but some information is still available on Facebook (www.facebook.com/advancedenergyforlife/).

4 Wall Street Journal, 14 April 2016 (www.wsj.com/articles/peabody-energy-files-for-chapter-11-protection-from-creditors-1460533760).

no longer competitive against fracked gas or renewable technologies. Game over? Not really.

The industry still goes to great length to talk up so-called ‘clean coal technology’, an oxymoron when one thinks of the billions of people in Asia suffering from air pollution due to coal-fueled ‘development’. Japan, for example, in what may be a final breath, is heavily promoting export of its coal technology to the rest of the world. At the same time, as old technology is being mothballed on both environmental and cost grounds, there is a risk that decommissioned (coal) power stations using outdated technology will be packed up and exported. Governments have a responsibility to stop such technology dumping.

The coal for development narrative has a strong advocate in Bjorn Lomborg, a corporate-funded contrarian political scientist at the Copenhagen Consensus Center. Lomborg flew to Brisbane for the G20 summit and spoke at a Peabody-sponsored event.⁵ The Center’s post-2015 project explicitly targeted the negotiations of both the SDGs and the Paris Agreement. Interestingly, this work was funded by the New Ventures Fund with the backing of the Bill & Melinda Gates Foundation and was widely publicized.⁶

Bill Gates personally promoted Lomborg’s flawed arguments on his widely read blog GatesNotes.⁷ At the same time, he along with some of the world’s richest (mostly) men have launched the Breakthrough Energy Coalition and an accompanying investment fund, the Breakthrough Energy Ventures (BEV).⁸ They are betting a fortune on the next big technology leap to bring sustainable energy to all and undo the damage done by coal.

5 www.desmogblog.com/2014/10/28/how-bill-gates-and-peabody-energy-share-vision-coal-powered-future-through-views-bjorn-lomborg.

6 www.copenhagenconsensus.com/post-2015-consensus.

7 See, e.g., www.gatesnotes.com/Energy/Two-Videos-Illuminate-Energy-Poverty-Bjorn-Lomborg.

8 See www.b-t.energy/. The group includes Mark Zuckerberg (Facebook, USA), Richard Branson (Virgin, UK), Jeff Bezos (Amazon, USA), Mukesh Ambani (Reliance, India), Aliko Dangote (Dangote, Nigeria), Jack Ma (Alibaba, China) and Hasso Plattner (SAP, Germany).

Bill Gates has opined he is keen to soon bless Africa with genetically modified organisms (GMOs), the world with more nuclear energy, and, if possible, the planet with solar radiation management technologies. Rather than dealing with the nitty gritty and political economy hurdles, such as democratic decision-making, to be overcome in bringing power to people, Gates and his friends bet on techno-fixes such as carbon capture and storage, geo-engineering, nuclear fusion, and the “tremendous opportunity to expand the use of nuclear power in the decades ahead by developing a new generation of advanced nuclear fission power technologies”.⁹

There are alternatives. Since 1980, research and innovation has greatly improved the efficiency of renewable technologies while sharply reducing the cost.¹⁰ Further innovation must be welcomed, but social and environmental criteria need to be applied and a wider societal debate is needed about the kind of new technologies people want. With the stakes so high, we should be wary of placing the power over the thermostat of our planet and the lives of billions of people into the hands of a small corporate elite.

Dinosaurs of the Anthropocene

Technology and innovation are essential components of a climate-centric narrative which places business at the heart of solving the development crisis. The argument goes that in order to prevent a full-blown climate crisis we simply have to accept radical technological solutions, including geo-engineering. This is incorrect and dangerous. Technological change of this magnitude is not possible without fundamental socioeconomic change. Business has an important role to play, and the renewables revolution is a visible example of its positive social and economic impact. However, science and technology cannot be treated in isolation. The question of who decides and who gains must be answered through a vibrant democratic societal debate. This will be difficult and can be messy,

9 www.b-t.energy/landscape/electricity/next-generation-nuclear-fission/.

10 Bloomberg New Energy Finance (2016).

but it is preferable over decision-making behind closed doors.

Fossil fuel subsidies

One example of undemocratic decision-making concerns the many governmental benefits that have been enjoyed by fossil fuel companies for decades. The energy sector has historically been the recipient of large subsidies and tax breaks. Levelling the playing field in support of clean technology by removing these subsidies is one example of a challenging debate, which largely takes place behind closed doors. Contrary to industry claims, and despite a G20 commitment from 2009 to phase out ‘inefficient’ fossil fuel subsidies, these subsidies persist.¹¹ The International Energy Agency (IEA) has demonstrated the positive impact of fossil-fuel subsidy removal for energy markets, climate change and government budgets. Its most recent estimates show fossil-fuel consumption subsidies worldwide amounted to US\$ 493 billion in 2014.¹² The International Monetary Fund believes the number to be even larger. Those subsidies were over four times the value of subsidies to renewable energy. The extent of production subsidies is far more difficult to assess. A study by the Overseas Development Institute (ODI) and Oil Change International estimated exploration subsidies by the G20 to be around US\$ 88 billion per year.¹³ For now, the G20 commitment to “rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption” is clearly lacking in substance. Instead, the IEA attributes the recent decline in subsidies primarily to the sharp drop in the international market price for oil since 2014.¹⁴

The case of Power Africa – Gas as bridging fuel lobby

That the power sector is big business, especially in fast-growing emerging economies, is clear. Many North American and European companies look to their governments for support in doing business overseas. In the case of the USA the Export-Import Bank (ExIm) and the Overseas Private Investment Corporation (OPIC) are central in opening the door as they insure commercial deals and provide financing support. Other countries have similar bodies providing insurance and loan guarantees. This way governments see an opportunity to do good both at home and in the rest of the world. Whether this is a win-win situation needs to be carefully assessed on a case-by-case basis.

In 2013, then US President Barack Obama launched the Power Africa initiative, with the stated aim of doubling the number of people in sub-Saharan Africa with access to electricity by committing more than US\$ 7 billion in financial support and loan guarantees over a five-year period. It initially focused on six countries: Ethiopia, Ghana, Kenya, Liberia, Nigeria and Tanzania with a goal of adding 10,000 megawatts (MW) and 20 million new connections.¹⁵ From the start, Power Africa gave a prominent place to US corporations seeking to develop their business in Africa. It was, at least in part, a response to the rise of China as the new investor of choice. Corporate giants such as General Electric (GE) saw in it an opportunity to sell gas turbines and grid technology. They effectively lobbied the US government to sideline what was conceived as a programme to support off-grid and renewable technology.

Forbes magazine wrote after the launching of the initiative that “General Electric will be perhaps the

11 The 2009 G20 meeting in Pittsburg, USA, agreed to “rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption”; see Washington Post, 25 September 2009: www.washingtonpost.com/wp-dyn/content/article/2009/09/25/AR2009092502453.html.

12 IEA (2015).

13 Bast et al. (2014).

14 IEA (2015).

15 See White House Fact sheets on Power Africa 2014 at the Obama Administration archived website <https://obamawhitehouse.archives.gov/the-press-office/2014/08/05/fact-sheet-powering-africa-increasing-access-power-sub-saharan-africa> and <https://obamawhitehouse.archives.gov/the-press-office/2015/07/25/fact-sheet-power-africa>.

biggest beneficiary of that \$7billion”.¹⁶ The chair of the US Export-Import Bank allegedly tweeted in this regard: “\$7B plan to power up @General Electric”.¹⁷ Among others, General Electric is involved in building the world’s largest liquefied petroleum gas fired power plant in Ghana.¹⁸

Following a slow start, the goal of Power Africa was revised upwards to add more than 30,000 MW of “cleaner, more efficient” electricity generation capacity and 60 million new home and business connections across the continent.¹⁹ In the meantime, many other bilateral and multilateral donors and over 100 companies, large and small, have signed onto this initiative,²⁰ which today appears more like business as usual than like a sustainable and affordable energy access initiative that can help achieve SDG 7 without detrimental effects on the climate.

Conclusion

In many developing countries that are starved for energy we witness a bifurcated development. On the one hand a major investment push into electricity generation, where big is still beautiful, on the other hand the rise of a vibrant off-grid solar photo-voltaic market. This pits big business against small and medium-sized business, with government often siding with big business. One big, not so beautiful, investment option is in nuclear energy. However, the economics do not make sense. Hence the choice for nuclear energy is often more a statement of geopolitical prowess, with plenty of government subsidies. The technology providers are State-owned or sponsored and the projects are only viable with cheap loans from project proponent countries, in particular Russia and China, providing soft loans to

willing takers. The cost of waste management and decommissioning are not generally included in the price of electricity as these costs fall to future generations. Upon closer inspection these deals do not make sense, as for example South Africa’s highest court just decided.²¹

While the costs of clean energy is dropping rapidly, governments still struggle to source the needed investments. Cash-strapped developing country governments are trending towards giving business more control of the energy sector through public-private partnerships (PPPs) and privatization, thereby taking debt and assets off government books. The value to the country as whole is, however, unclear. Many PPP contracts do not provide taxpayers with value for money, as has been widely documented in the EU.

It also bears keeping in mind that securing SDG 7 requires tackling the challenges of SDG 13 on climate change. A particular challenge poses the so-called ‘stranded assets,’ that is, investments in fossil fuel energy that are incompatible with SDG 13 and the Paris Agreement. We already observe such assets being written off prematurely in Europe and North America. It is often governments that are on the hook for the resulting costs. Here the role of State-owned companies bears further investigation. Even following a recent wave of privatizations and energy market liberalization, governments continue to exercise great control over the sector beyond its regulation. Few State-owned utilities, for example, offer large consumers the choice of renewable energy. Interestingly, some of the world’s largest companies, such as Apple, Google and Microsoft, have responded by joining buyers’ clubs and have started directly investing in renewable electricity.²²

16 www.forbes.com/sites/christopherhelman/2013/07/01/with-power-africa-plan-obama-to-grease-billions-in-deals-for-g-e/.

17 Quoted in an open letter by 75 African groups to President Obama from 10 November 2013 demanding he stop pushing dirty energy through Power Africa, see www.foe.org/news/archives/2013-11-75-african-groups-demand-obama-stop-pushing-dirty-en#_ftn3.

18 www.bloomberg.com/news/articles/2016-10-25/ge-venture-to-build-world-s-largest-lpg-power-plant-in-ghana.

19 www.usaid.gov/powerafrica.

20 www.usaid.gov/powerafrica/partners.

21 BBC World Service, 26 April 2017 (www.bbc.com/news/world-africa-39717401).

22 In 2015, Renewable Choice estimated this at 3 GW (see www.renewablechoice.com/blog-corporate-energy-buyer/). See also WRI/WWF’s Corporate Renewables Buyers Principles (www.buyersprinciples.org/about-us/#Signatories) and REBA (www.rebuyers.org/).

As discussed around the world, low (fracked) natural gas prices and a sharp decline in the cost of renewable energy technologies have marginalized coal. Investors are leaving the coal sector in droves, confirming that these assets will be stranded. But what about the impact on workers and communities left behind after closure? It is the responsibility of businesses, unions, communities and national decision-makers to secure pension rights, facilitate a transition to new, decent jobs and in doing so make the energy transformation a managed, just transition.

The opportunities to deliver on SDG 7 are real and business has a large role to play. Social impact investors and small and medium-sized businesses are already making a positive difference, challenging the proponents of global techno-fix solutions, as well as the dinosaurs of the fossil fuel lobby.

References

Bast, Elizabeth, Makhijani, Shakuntala, Pickard, Sam and Whitley, Shelagh (2014): The fossil fuel bailout: G20 subsidies for oil, gas and coal exploration. London/Washington, D.C.: Overseas Development Institute/Oil Change International.
www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9234.pdf

Bloomberg New Energy Finance (2016) presentation at EMEA Future of Energy Summit by Michael Liebreich, Chairman of the BNEF Advisory Board, 11 October 2016.
www.bbhub.io/bnef/sites/4/2016/10/2016-10-11-BNEF-EMEA-Summit-ML-Keynote.pdf

Ernst & Young (2014): From Defense to Offense. Distributed energy and the challenge of transformation in the utilities sector.
[www.ey.com/Publication/vwLUAssets/EY_-_From_defense_to_offense/\\$FILE/EY-From-defense-to-offense.pdf](http://www.ey.com/Publication/vwLUAssets/EY_-_From_defense_to_offense/$FILE/EY-From-defense-to-offense.pdf)

International Energy Agency (2015): World Energy Outlook 2015. Paris.
www.worldenergyoutlook.org/weo2015/

PWC (2014): The Road Ahead - Gaining momentum from energy transformation.
www.pwc.com/gx/en/utilities/publications/assets/pwc-the-road-ahead.pdf

World Bank (2017): State of Electricity Access Report 2017. Washington, D.C.
documents.worldbank.org/curated/en/364571494517675149/pdf/114841-WP-v2-FINALSEARwebopt.pdf

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