World Bank Comments to the Bank Information Center (BIC) report: World Bank Development Policy Finance and Climate Change in Egypt

Summary

Thank you very much for giving us the chance to review your **World Bank Development Policy Finance and Climate Change** report, which rightfully emphasizes the climate change risk posed by Egypt's increased use of coal for generating electricity for its households and industries. For the World Bank Group (WBG), avoiding coal expansion across the Middle East is a key priority.

We want to assure you that we share your commitment to avoiding the use of heavy fossil fuels in order to reduce the overall volume of greenhouse gas (GHG) emissions that are polluting our planet and contributing to rising global temperatures. To this end, we are focused on encouraging the implementation of climate friendly energy policies in Egypt and elsewhere. This response is divided across two section – first section on strategic focus of DPF and World Bank program on low carbon growth in Egypt, while the second section refers to specific points mentioned in the Bank Information Center (BIC) report.

Section 1: World Bank Group's program in Egypt, led by Development Policy Financing (DPF), focused on policies for low carbon growth

The World Bank's Development Policy Financing (DPF) series in Egypt supports policies that provide the right incentives to prioritize low-carbon development. The World Bank's engagement in Egypt's energy sector, of which the DPF series forms an integral part, is focused on promoting growth while shifting towards a cleaner energy mix and reducing the energy intensity of GDP. The Egypt DPF supports a homegrown reform program in the energy sector, which is closely aligned with the priority mitigation actions in Egypt's Intended Nationally Determined Contributions, including more efficient use of energy, especially by end-users; and increased use of renewable energy.

The Egypt DPF series does not contain measures that promote the use of coal. Egypt's switch to coal was a response to a shortage in its production of natural gas, rather than to any subsidy being provided to the private sector for coal. This increase in domestic supply of gas requires timely commissioning of new projects and provide the economic price signals to upstream producers.

The DPF reform program promotes economically priced natural gas to take the place of fuels like oil and coal. Oil has largely filled the gap left by gas, its use increasing from 17.1% to 28.9% in the power sector between the fiscal years (FYs) 2011/12 and 2014/15. GHG emissions from that sector grew by 20% within four years as a result. If enough natural gas were available, we estimated that GHG emissions could fall by over 8 million tCO2 a year.

Overcoming its gas shortage is critical for Egypt to avoid using the more GHG-intensive coal and oil as an alternative to gas to fuel its electricity consumption. Economically priced natural gas is Egypt's lowest cost means of providing a flexible supply of electricity to achieve the balance between demand and supply.

Wider Context of Egypt DPF

The DPF for Egypt is anchored in a medium-term strategy set out in the Country Partnership Framework (CPF) that was endorsed by the World Bank's Board in December 2015.

The strategic framework articulated in the CPF is focused on eliminating extreme poverty and boosting shared prosperity in a sustainable manner, and organized under three focus areas: (i) improving governance; (ii) private sector job creation; and (iii) social inclusion. Governance lies at the heart of the reform program for the country.

Advancing fiscal consolidation is the first pillar of the DPF, a key element for achieving macroeconomic stability in Egypt, a prerequisite for growth, for private investments, the creation of job opportunities, and protecting the poor from rising food prices and consequent increases in poverty rates.

Sustainable energy supply, the second pillar of the DPF, has two priority areas for reform in Egypt needed to underpin efforts to reduce poverty and enhance shared prosperity—energy subsidies and sector governance.

These have the potential to dramatically improve Egypt's fiscal situation and reduce GHGs and significant distortions in sectors: greater efficiency and productivity in the private sector, and thus more job opportunities; bringing energy demand in line with supply; encouraging more sustainable growth; and more funding for social programs.

The third pillar supports competitiveness: systemic reforms that simplify regulations, increase consistent implementation, and eliminate barriers to competition.

World Bank Development Policy Financing in Egypt

At the strategic level, the Development Policy Financing series in Egypt focuses on energy efficiency and making alternatives to coal attractive—specifically the integration of natural gas and renewable energy—because the WBG believes this is the most sustainable approach to energy policy. **Overall, the policy reforms supported by the three year DPF series for Egypt are expected to reduce GHG emissions in the energy sector as much as 11% to 21% by FY2019 compared to baseline trajectory (please refer to Annex for details).**

The WBG's engagement in Egypt includes significant technical assistance to the Government of Egypt (GoE) to improve its investment framework, which would help the renewable energy sector. We also have several projects that go beyond the DPF series to support renewable energy, including the Wind Power Development Project and the Scaling Up Clean Energy in Egypt project.

To promote clean energy, the Wind Power project is working toward connecting wind power generated in the Gulf of Suez region to the national grid, and also providing technical advice for the first wind power project to be financed by the private sector.

Under the Clean Energy project, two parts of the WBG—the World Bank and International Finance Corporation—provide technical assistance and policy advice to Egypt's renewable energy program. The World Bank is providing technical assistance to the government on fossil fuel subsidy reform and urban energy efficiency. The IFC is providing technical assistance on industrial energy efficiency, including a detailed analytical report published recently on alternate fuels for Egypt's cement industry[1].

Egypt's gas shortage has also had an indirect, financial impact on the growth of its renewable energy sector. The WBG believes that an assured gas supply is important for ability to scale up renewable energy because of intermittent nature of renewable energy and due to investments in the renewable

[1] http://www.ifc.org/wps/wcm/connect/region__ext_content/ifc_external_corporate_site/middle+east+and+north+africa/resources/alternative+fuels

energy sector being held back due to foreign exchange shortages, aggravated by Egypt's large bills for imports of coal and oil.

The WBG's DPF series for Egypt supports the prioritization of low-carbon development. We fully agree that DPF loans need to be carefully assessed for climate change risks and designed specifically to support policies that provide the right incentives to prioritize this. As more than 70% of Egypt's greenhouse gas emissions come from energy use, the WBG's engagement in Egypt's energy sector is focused on moving toward cleaner energy and reducing the energy intensity of Egypt's GDP.

Energy Subsidies

The GOE has brought down energy subsidies as a percentage of GDP—from 6.6% of GDP in 2014, to 2.6% in 2017. This drop is largely the result of increases of 40% to 80% in fuel prices, and an almost 70% cumulative increase in electricity tariffs.

Limits on how much energy prices can be changed, however, still get in the way of pushing for less use and more efficiency. Nonetheless, Egypt has seen its peak demands drop—from 31.5 GW in 2015 to 29.5 GW in 2016—largely on account of government reductions to the electricity subsidy, which is supported by the DPF.

The DPF series for Egypt supports a homegrown reform program in the energy sector that is closely aligned with Egypt's own climate change mitigation measures.

These are: (i) the more efficient use of energy; (ii) the increased use of renewable energy; (iii) the use of advanced locally-appropriate and more-efficient fossil fuel technologies; and (iv) phasing out energy subsidies within by 2019.

Reducing Pollution

More efficient urban transport and railway programs could potentially be powerful instruments to mitigate the effects of climate change in Egypt. Ongoing policy work by the WBG to improve urban transport in Cairo and a well-advanced railway program will help reduce air pollution and GHG emissions in Cairo.

Reducing pollution is another aspect of reducing GHG emissions. The WBG finances projects with co-financiers, such as the Japan International Cooperation Agency (JICA), the European Investment Bank (EIB), and the French Development Agency (AfD) for cost-effective solutions in environmental "hot spots," through financing industrial pollution abatement sub-projects.

In addition, it improves the GOE's capacity in environmental management through strengthening its regulatory and management capacity, as well as strengthening innovative market-based instruments.

Overall, there is expected to be a more than 80% rate of reduction in the quantity of pollutants emitted by industrial companies in each of the hot spots targeted because they produce pollution.

The GOE has improved its environmental standards and regulations. The WBG's Sustainable Persistent Organic Pollutants (POPs) Management Project for Egypt aims at improving the management and disposal of targeted stockpiles of obsolete pesticides, including Persistent Organic Pollutants.

Section 2: World Bank comments on specific statements in the report

Table 1: Responses to specific claims relating to the GHG impact of the operation

Report statement	World Bank Comment
The Bank's baseline trajectory is completely unclear as well as the assumptions it is based on. Even so, given the DPF measures support both renewable energy incentives as well as fossil fuel incentives, on balance it is most likely that the DPF measures result in increased GHG emissions for Egypt and potentially from an increase in gas exports that could result from further significant developments in natural gas.	The baseline trajectory assumes 5% annual growth in demand, constant consumption of gas, and the construction of a power plant and retirement pipeline, as shared by the Government of Egypt, as well as standard assumptions about parameters of the new power plants.

Table 2: Responses to specific claims relating to natural gas prices and policies

Report statement	World Bank Comment
The 2014 new coal regulations coupled with the DPF-supported increase in natural gas tariffs led to the unintended result of 90% of cement factories fuel shifting from natural gas to coal.	There was no DPF supported increase in natural gas prices. The last price increase for natural gas was in July 2014, long before the DPF came into place in 2016. It was not a condition or prior action of the DPF.
The DPF's push for a new gas law risks over expansion, i.e. in excess of domestic needs.	Egypt is facing a natural gas shortage that is likely to continue over the coming decade, as we estimate that even new finds such as the Zohr gas field are not large enough to meet increasing demand and falling domestic production from other, existing fields. More domestic gas will be cheaper than coal imports for Egypt though, so the over expansion of gas would avoid greater dependence on coal.
The new gas law incentivizes more investments into exploration but exploration for gas cannot by separated from oil exploration and both contradict the 2 degree goal.	The new, large gas finds in the Eastern Mediterranean are almost all purely gas fields, not gas fields associated with oil fields.
The Bank's DPF Program Document discloses that in July 2014, Egypt increased prices of electricity by an average 31 percent and on fuels (natural gas, fuel oil, and gasoline) by 40%-78%, and laid out its plans to reform subsidies in the next five years through periodic increases of fuel and electricity prices	These were not prior actions or conditions of the DPF operation. The price reforms occurred before the DPF.
It is clear the price subsidy reforms are having a positive impact on the budget deficit and less clear how well these reforms will improve security of domestic energy supply.	The underpricing of gas was a huge problem for upstream investors as it led to arrears and disincentivized investment, hindering exploration and production.
There is evidence of significant fuel switching from costlier natural gas to cheaper coal (See New Coal Regulations section below).	This shift happened not because of prices, but because the government stopped supplying gas to industry due to the gas shortage.
First, Egypt's domestic gas supply problem is as much the consequence of decade-long management and policy deficiencies as it is the short-term consequence	The fact that political risks played a role in the shortage of natural gas does not weaken the case for reforms. In addition to political uncertainty, there was a vicious

of political turmoil. The turmoil following Egypt's 2011 revolution considerably hindered gas developments, directly through temporary shut-downs in production, but more structurally by depriving the Egyptian government of essential fiscal resources to meet various contract commitments towards international companies. By 2014, Egypt owed foreign gas operators substantial debt. As a result, some companies delayed project investments.	cycle of underpricing gas, which had resulted in a shortfall of investment in exploration and production, and in a shortfall in foreign exchange earnings, which in turn resulted in a shortfall of investments because of growing arrears.
Thus, prior to the DPF's approval, Egypt had already taken at least five measures, including some DPF prior actions, that were addressing gas shortages and significant investments in future gas supply were already in the works.	There seems to be confusion about how a DPF works. Prior actions are by definition policy and institutional actions that were already taken by a borrower, such as the government, on its own, before World Bank's board approval for the DPF.
As demonstrated above, the new coal regulations mark a major change for Egypt and are significantly tied to the World Bank's DPF program, including: energy subsidy reforms, liberalization of the electricity sector, new electricity investment incentives, and simplified industrial licensing.	There was no DPF-supported action for coal or for an increase in natural gas prices. The proposals on accountability, transparency, and market reforms in natural gas would help reduce inefficiencies in state owned enterprises, facilitate additional gas supplies, and even allow merchant power trading for renewable energy.

Table 3: Responses to specific claims relating to industrial licensing and investment law

Report statement	World Bank Comment
The subsidized electricity for new investments directly contradicts the DPF's reforms to decrease energy price subsidies.	When we measure subsidies, we include all electricity subsidies sold to producers. The DPF-supported reforms will lead to a net reduction in electricity subsidies. The paper seems to suggest that we do not include electricity prices to producers in our accounting. In addition, the amendments to the Investment Guarantees and Incentives law that were supported by the first DPF on investment incentives were focused specifically on "defining investor rights and improving investment facilitation services", and did not support any particular investor incentives. The actions supported by the DPF on incentives were related only to transparency of the incentives provided. The action supported by the DPF on incentives was that MOI/ GAFI is to publish "a complete inventory of available investment incentives and eligibility criteria to enhance information for investors and the general public." Further, it is our understanding that the incentives regime is currently under review, so it is difficult to comment on precisely what incentives are actually available or to be provided, hence the World Bank's focus on transparency in the incentive regime to investors and

	the general public. In summary, the DPF does not support specific incentives or subsidies to be granted to investors. Rather, it focuses on making sure that the incentive framework in place is more transparent.
Egypt has announced plans to install about 12.5 GW of coal-fired power stations by 2022. These new coal plants will be subsidized using the new investment incentives of the World Bank DPF-supported Investment Law Amendments as these incentives apply to all electricity investments.	The industrial licensing reforms as supported by the first DPF specifically include a risk-based approach to industrial licensing. The supported PM decree No. 2807 refers to "limiting the scope of industrial licensing to risk-based enforcement of health, safety, security, environment and land use requirements by responsible agencies." So in fact it explicitly calls for GoE to implement a differentiated approach based on social and environmental risks (as well as safety and land use requirements) as criteria for differentiated procedures for granting an industrial license.
As demonstrated above, the new coal regulations mark a major change for Egypt and are significantly tied to the World Bank's DPF program, including: energy subsidy reforms, liberalization of the electricity sector, new electricity investment incentives, and simplified industrial licensing.	There is no link whatsoever between new coal regulations introduced by the government and the World Bank program. The new investment incentives and licensing procedures apply to all kinds of electricity generation. There is no benefit for coal vis-à-vis other sources.

4: Responses to specific claims relating to governance reforms of electricity and gas

Report statement	World Bank Comment
It is unclear how the trigger stipulating the privatization of 17 GW of gas-fired power plants specifically improves power supply. The government already financed the building of these new plants. Such a transfer of new power assets could likely have hidden subsidies especially if the government does not receive full cost recovery including cost of the land and financing.	There is no policy trigger supporting the privatization of plants within the DPF.
As demonstrated above, the new coal regulations mark a major change for Egypt and are significantly tied to the World Bank's DPF program, including: energy subsidy reforms, liberalization of the electricity sector, new electricity investment incentives, and simplified industrial licensing.	There is no link between new coal regulations introduced by the Government of Egypt and the World Bank program.

Table 5: Responses to specific claims relating to renewable energy

Reprot statement	World Bank Comment
As the Bank was preparing its billion dollar DPF program targeting sustainable energy, it should have included prior actions for reforms to specifically address the cement industries' energy shortages in as climate-safe a manner as possible, such as measures to promote the usage of waste, etc.	This is being addressed through the technical assistance that the WBG provides to the government and to industry, including on waste heat recovery. A DPF cannot fund technical assistance. The price increase happened long before the DPF.
The tenders for renewable energy projects demonstrated enormous interest from the private sector. Although the DPF clearly supports the new Renewable Energy Law and its initial implementation, it	We are going beyond the first steps in the triggers for DPF 2 and DPF 3, and we are also providing, under several projects on transmission integration of renewable energy, policy support, and technical

is unclear why the DPF program did not go beyond this first step and provide support for subsequent steps necessary to prioritize and ensure the renewable energy sector reaches its full potential in Egypt.	assistance to Egypt's Renewable Energy program. Technical assistance cannot be funded under a DPF, and a DPF cannot cover the Bank's entire engagement with a country, but has to be seen in the context of the entire program.
According to industry experts, with 69 large-scale solar projects of more than 20 MW achieving qualification, the key step now for the government is to provide a bankable framework to potential debt providers so that developers can reach financial close.	We agree and are providing technical assistance to the Government of Egypt to improve the investment framework.
However, there are several important next steps that Egypt will need to take towards meeting the renewable energy target, including: • well-managed implementation requiring strengthened government capacity; • upgrades to the electricity grid to be able to fully utilize fluctuating renewable power; and	These are already being undertaken through complementary projects and technical assistance (please refer above). Neither capacity building nor investments can be financed through a DPF.

Annex

Figure 1: GHG emissions by sector in Egypt, excluding land-use change. Source: CAIT Climate Data, WRI.

Energy emissions consists of five subsectors: Electricity/Heat, Manufacturing/Construction, Transportation, Other Fuel Combustion, and Fugitive Emissions.

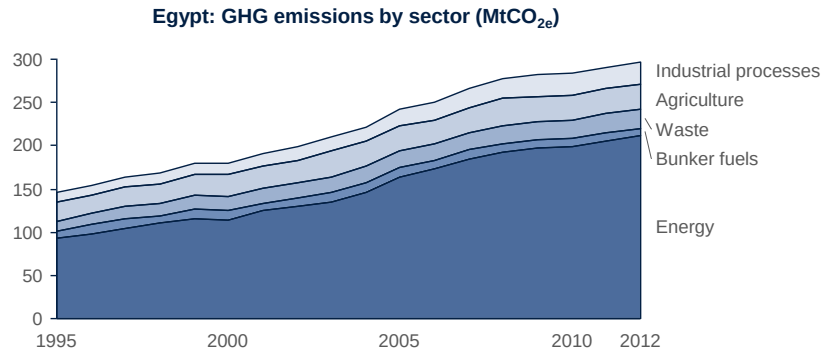

Table 6: Fuel consumption and GHG emissions from Egypt's power sector, indicating switching from natural gas to LFO/HFO fuels due to the natural gas shortage from FY2012 to 2015.

		FY2012	FY2013	FY2014	FY2015	CAGR
HFO	k toe	4,560	6,545	7,760	8,528	16.94%
LFO	k toe	65	104	183	478	64.68%
Natural gas	k toe	22,458	22,162	21,215	22,137	-0.36%
HFO	million tCO_{2e}	14.83	21.28	25.23	27.73	16.94%
LFO	million tCO_{2e}	0.20	0.32	0.57	1.49	64.68%
Natural gas	million tCO_{2e}	52.80	52.10	49.88	52.05	-0.36%