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## Making Light Work

Policy Briefing

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## 1. Introduction

Our project has four policy-facing objectives:

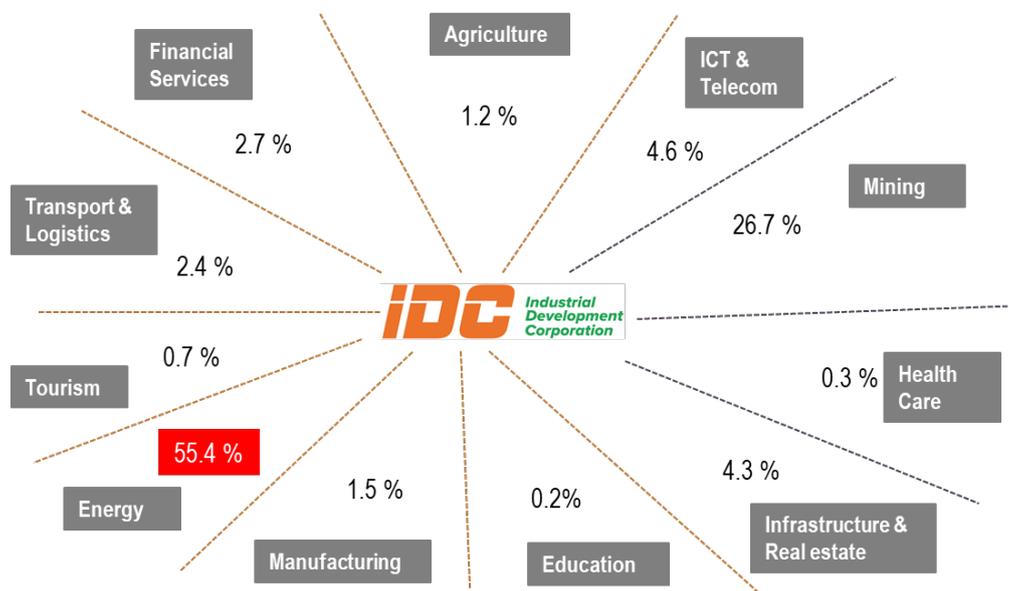
- i. Evaluate progress of a new programme to implement utility-scale solar power in Zambia
- ii. Propose actions in the near term to address specific challenges the programme may face
- iii. Consider what medium term policy changes could improve the efficacy of the programme
- iv. Place the programme within the strategic longer-term context of Zambia’s SDG 7 targets

## 2. Policy intermediary: IDC

We describe the state-owned *Industrial Development Corporation* (IDC) as a policy intermediary. The IDC was incorporated in 2014 as the government’s investment holding company. They operate at the interface between the solar programme and the Zambian government. As such, they are well positioned: a) to engage with our research and findings, and b) to disseminate this research to key policy makers.

The IDC owns a portfolio of 34 companies on behalf of the government, with total assets valued at US\$ 5 billion. The energy sector dominates the portfolio by value (Fig 1), giving this project additional salience from a policy intermediation perspective.

Fig 1. IDC portfolio by value

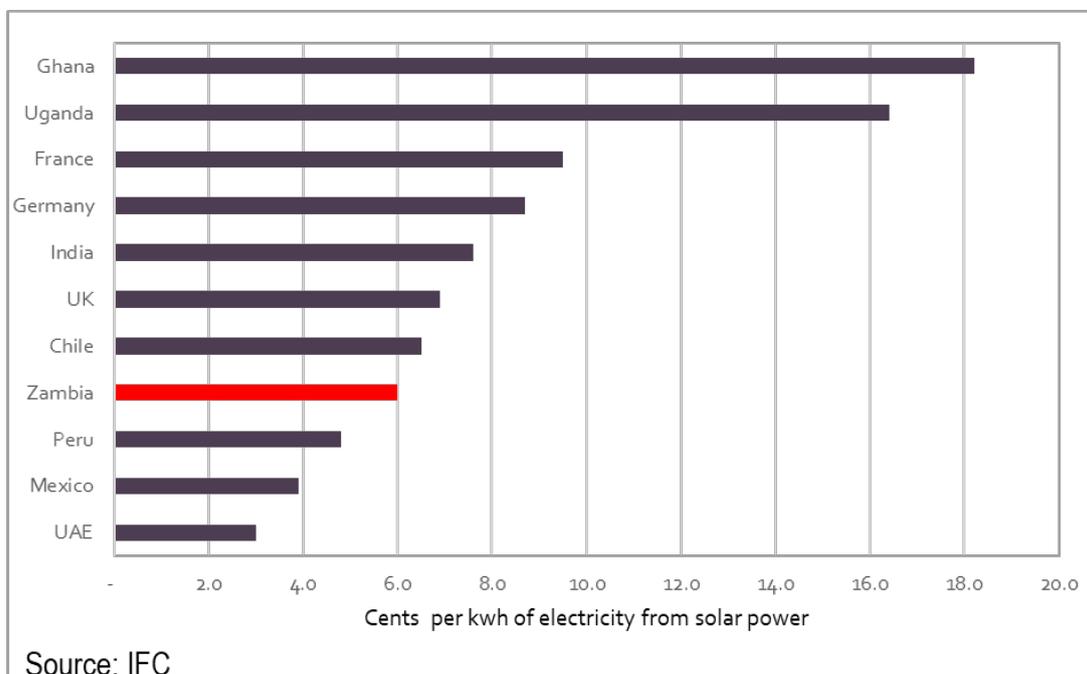


## 3. The programme: Scaling Solar

Scaling Solar is designed to be a ‘one-stop-shop’ for governments to rapidly mobilise competitive, privately funded, grid-connected solar PV projects within two years. The programme brings together several World Bank Group (WBG) services, under a single

engagement. These services include advice on site selection; simple and rapid tendering; standardised documentation; financing and risk management products. New capacity is added to the grid incrementally, over a series of ‘rounds’. Zambia was afflicted by drought in 2015-16, resulting in severe power shortages due to a reliance on hydropower. Following a directive from the President of the Republic of Zambia, the IDC commissioned Scaling Solar to launch a programme, in 2015. Bidding for Round 1 (around 80 MW of capacity) was completed in May 2016. By any account, the tender process was an outright success. The winning bid of 6 US cents/ KWh was at the lowest solar tariff in Africa at that point in time (Fig 2).

Fig 2. Utility Solar tariffs (2016)



Tenders for the two site projects in Round 1 were prepared and executed within just 9 months, suggesting that the two-year target for commissioning was on track. However, to date (February 2018), construction is not complete at either site, putting the programme significantly behind schedule.

Our research has therefore focused on understanding the reasons why these delays have occurred, and to consider what policy actions could help to address specific challenges and improve the programme’s efficacy.

#### 4. The policy challenges we identify

- i. Introducing solar power to a hydro-hegemonic policy regime (hydropower accounts for over 90% of Zambia’s electricity generation) has met active and passive resistance

that is perhaps not surprising in retrospect but was not adequately anticipated. For example, the country's energy regulators took time to get comfortable with the changes to the grid code that were necessary to account for intermittent power.

- ii. Involving World Bank Group companies as both an advisor and a financier on this programme created a perceived conflict of interest. For example, the electricity utility is trying to purchase solar energy from the developers for as low a tariff as possible, while in contrast, the developers are seeking to maximise their return. WBG companies were acting as both advisor to the IDC (who owns the utility) and as well as financier to the developers.
- iii. Political expectations around this programme were very high. Power shortages during the drought period had severely affected the country. The mining sector – a major employer – had been forced to reduce production, resulting in layoffs; and there was immense pressure on government to find a solution. Delays to Scaling Solar were often not communicated in a timely and comprehensive manner to the key ministries of energy and finance, creating tension and frustration. Meanwhile serial over-optimism on construction dates undermined credibility.
- iv. During the Round 1 process, the government received several unsolicited bids proposing a shorter completion time, under similar financial terms as Scaling Solar. These bidders lobbied government to cancel the Scaling Solar programme, characterising the delays as evidence of a failed experiment. Responses to these unsolicited bids were ad hoc and uncoordinated creating additional uncertainty and exacerbating delays.
- v. The sites for Round 1 were selected by the government, under advice from WBG companies. Disputes over land ownership contributed to delays, while various geotechnical issues necessitated additional surveys and remedial work. Our interviews with project developers have suggested that overall, the site selection process was sub-optimal.
- vi. As the projects moved to financial close, unplanned and unexpected requests appear to have emerged from the financiers, on questions around land agreements and property ownership. Dealing with these queries caused deadlines to be missed around the approvals of key documents such as Power Purchase Agreements and financing documents.
- vii. In terms of employment and societal inclusion, the programme has been challenged by policy makers and others over the perceived lack of local involvement. Specifically, there were no requirements embedded into the engagement contracts regarding local sourcing of labour or resources, nor were any social, environmental, economic or governance conditions applied within the process that were consistent with a pro-poor growth strategy.

- viii. Relatedly, the bidding consortia were not required to include a local partner at the tender stage, nor at the construction stage for the winning bids. None of the pre-qualified bidders included a Zambian partner. IDC, which has equity holdings in the winning consortia, were able to help navigate local conditions to some extent, but a lack of cultural awareness around doing business in Zambia contributed to delays and confusion.

## 5. The policy solutions we propose

- i. The tremendous opportunities that clean, cheap, renewable energy presents for Africa must be understood in the context of the transition that needs to take place. A hydro-hegemonic regime is naturally and fundamentally resistant to change at many levels. Support from the highest decision makers in government for a systematic programme of change management within key ministerial departments and regulatory bodies is a sine qua non for an effective transition.
- ii. There is an economic, social and cultural necessity to actively align private sector interests with strategic national objectives. In the absence of these alignment, a culture of misinformation, scepticism and mistrust can quickly develop, contributing to delays. A commercially inclined public co-investment partner is a desirable but insufficient criterion to address this. Affirmative action may be the most effective short-term solution: there may be lessons to learn from South Africa's experience with empowered companies.
- iii. Innovative development finance institutions (DFIs) have a critical role to play in de-risking infrastructure projects for private sector involvement. However, the role should be explicit. Our research shows that many stakeholders felt that concessionary finance from the IFC risked 'crowding out' commercial finance, because the private sector would be unable to match those terms. DFI's need to maintain (but stick to) their catalytic role in mobilising blended finance.
- iv. Policy should emphasise the development of local capital markets to fund small and medium scale renewable energy projects. Enabling developers to align their exchange rate risk by borrowing at competitive rates in the same currency that they receive their revenues will make a significant difference to project bankability. Innovative approaches are needed to build domestic liquidity. For example, there may be assets in IDC's US\$ 5bn portfolio that could be securitised or partially floated on the local Lusaka Stock Exchange (LuSE).

## 6. Strategic Context

Separate to the Scaling Solar programme, the Zambian government launched its Renewable Energy Feed-In Tariff programme in late 2017. It has chosen GET FiT – an organisation backed by the German development bank, KfW - as its implementation partner. The programme is distinct from the utility-scale projects of Scaling Solar, as GET FiT supports small- to medium-scale Independent Power Producer (IPP) projects up to 20 MW.

From a policy perspective however, the arrival of GET FiT in Zambia raises some interesting questions of overlap. It’s stated aims are to “strengthen the Zambian power market by encouraging private sector participation by a wider range of developers, construction firms and financial institutions... GET FiT Zambia also strives to boost institutional capacity and the policy and regulatory framework for renewable energy IPPs in Zambia.”<sup>1</sup> It is focussed on four components (Fig 3) for which there is a clearly articulated logic.

**Fig 3. Components of GET FiT Zambia**



However, these components are as relevant to policy for large-scale projects such as Scaling Solar, as they are to the projects that GET FiT targets. This matters, because it would be highly undesirable for policy to develop in siloes, with duplicated channels. At the least, this would be a waste of precious resources (particularly institutional capacity). More concerning is the risk that unnecessary confusion exacerbates delays, making the already challenging SDG 7 targets, even more difficult to achieve.

<sup>1</sup> <https://www.getfit-zambia.org>, Feb 24, 2018

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## 7. Next steps for our project

The British Academy's Sustainable Development Programme has enabled us to engage at the implementation level within a sector that is of fundamental importance to the social, economic and environmental development of many countries in the DAC list. Our work to date has been calibrated by the practical realities of the energy transition; yielding important and empirically substantive insights from a policy perspective.

For the remainder of our project, we will focus on the evolution of the Scaling Solar and GET FiT programmes in Zambia, with an emphasis on the issues we raise in the previous section. In terms of academic and policy outputs, we are producing a series of publications that variously address questions of governance, planning, strategy and implementation. These outputs are informed by one core objective: to help unlock the opportunities that affordable, reliable, sustainable and modern energy can bring to many millions of underserved people.