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The Need for a Smarter Funding Ecosystem

Innovations Case Commentary:
Husk Power Systems

Most people don't realize how difficult a challenge Husk Power is tackling today. The geographies in which the company operates are physically harsh and suffer from severe skilled labor shortages. Their technology platform and business model are new and require large teams to implement. Execution of the scale-up plan requires high levels of capital expenditures and R&D spending. Nevertheless, Husk Power is succeeding, step by step, in delivering on its business plan.

It's important for us as funders to remind ourselves of this context, as it is an example of how we are expecting entrepreneurs to tackle the world's toughest challenges with new technologies in the toughest markets in the world, all while delivering a commercial return for investors in less than 10 years.

It's an enormous task, and one that can only be achieved with a mix of funding instruments—from soft funding to angel investment to venture capital to commercial debt—deployed in ways that are market-building, not market-distorting. A glance at the current funding ecosystem in India reveals a mostly siloed approach to funding: grant providers primarily fund NGOs, debt providers overwhelmingly fund fully collateralized enterprises, and venture capitalists tend to fund revenue-generating enterprises with at least a year-long track record, although there are a few exceptions. The results are threefold: (1) a severe lack of unsecured debt, forcing many enterprises to use expensive equity to fund their working capital requirements, which in turn increases equity investment requirements and decreases the return on investment for investors; (2) limited deal flow for venture capitalists and other social investors, as few enterprises are able to attract sufficient seed-stage funding for proof of concept; and (3) provision of grant funding is largely disbursed in unleveraged ways to organizations that are not structured for scale, thus decreasing its long-term impact.

We need to innovate around how the providers of these different funding instruments can work together more effectively.

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THE SHELL FOUNDATION APPROACH

Our approach at Shell Foundation has been to support small and growing enterprises that provide modern energy services to the poor in ways that are financially viable and scaleable. We support these enterprises by providing smart subsidy in the form of grants, typically at the post-R&D, pre-revenue stage, when commercial funding is not yet available. We also subsidize the creation of new financial intermediaries that are structured to provide appropriate finance and skills support to sections of the market that are currently underserved by existing financial institutions.

From Traditional Grant Funding to Smart Subsidy

Our grants are never used to subsidize the price of the end product or service to the consumer. That is a market-distorting practice traditionally associated with grant funding, and is more likely to frustrate the long-term growth plans of an enterprise than to help them. Our funding is instead used to create the core components required for scale: seed funding for proof-of-concept, business plan and strategy development, initial partial subsidy support for senior managers who are needed but often too expensive to hire at the pilot stage, creating relationships with new channel partners, R&D, and technical assistance from relevant experts, including Shell engineers and safety managers. This market-building approach is what differentiates smart subsidy from traditional grant funding.

It's critical to note that smart subsidy should not necessarily be delivered independently of commercial funding. A popular misconception is that once an enterprise has attracted commercial risk capital, grant funding ceases to play a role. In fact, grant funding delivered in parallel with commercial investment can be particularly catalytic and lead to higher impact per grant dollar spent, as both types of funder are able to leverage their investments while remaining true to their investment strategies. What changes is the role of grant funding post-commercial investment. For example, we made our third grant to Husk Power (US$550,000) contingent on the company raising at least US$1 million from commercial investors. We then altered the role of our grant from mainly providing capital expenditures to build new power plants, which was necessary when no other capital was available, to a focus on providing operating expenditures to support key long-term initiatives (R&D, HSSE, human resources, and training). We have employed a similar strategy with our fourth grant (US$1.1 million). Disbursement of a portion is tied to the company raising a Series A round of funding, expected to be more than $5 million. At that stage we expect to disburse the final portion of our grant to Husk Power.

The Risks of Non-Dilutive Funding

Manoj outlined the funding considerations for Husk Power, and the relative advantages and appropriate timing of different instruments. Despite the merits of

smart subsidy, we also need to be cognizant of two major risks that are a direct result of our funding.

Risk of over-subsidizing a business

While the components of a business that we fund are vital to long-term growth, they are also at risk of excessive subsidy, which has the potential to remove the incentive to innovate and ensure a low-cost structure. For example, it would be tempting to provide sufficient funding to Husk Power to equip its existing operational sites with safety standards that Shell would employ at its refineries. This might reduce some safety risks in the short term, but it would also increase the capital expenditures per plant to the point where the business would become unattractive to next-stage investors. We need to be smart about deploying the key HSSE lessons learned from Shell experts in selective and more cost-effective ways. The same holds true for human resources. We are using a grant to partially subsidize the cost of some of the senior management at Husk Power, although these are costs that the business will be able to absorb without subsidy in the next two years.

We mitigate this risk partly by asking for shared risk, including co-investment, from our grantees, and mutually agreeing with management on an exit strategy for subsidy provision. We are also starting to involve commercial investors early in the process to help ensure that they understand the use of the grant and the costs that will eventually need to be borne entirely by the business.

Risk of becoming perceived as a noncommercial organization

As an early stage company like Husk Power grows, it's important that it be perceived as a commercial entity on its way to financial viability. By being a visible partner with Husk Power, for example, we put the company at risk of being perceived by potential future investors and government as a noncommercial operation. At a higher level, we run the risk of helping create the perception that serving rural customers with reliable and affordable electricity requires grant funding, and therefore doesn't represent a commercial investment opportunity for mainstream investors. Messaging plays an important role in mitigating this risk, and we and our grantee jointly emphasize the role that grant funding is playing in the organization and make it clear that there is an enterprise-based approach at the core.

Helping Next-Stage Investors Generate a Financial Return

Interestingly, the risk often heard from other grant providers relates to the fear of helping to provide a financial return to next-stage commercial investors. Our view is that the idea of allocating grant funding only to NGOs is archaic and needs to be weighed against the real, lasting, and scalable social benefits associated with providing grants to social enterprises, like Husk Power. The reality is that if an investor is eventually able to harvest a financial return from a company we subsidized several years ago, it actually means that we've done our job effectively. It also necessarily means that company has proven its potential to achieve scale and hence delivered on our charitable objectives. We specifically use grant funding to create

the elements of a business that will create value for existing and future investors, because if those value drivers do not exist, the company will never be able to attract sufficient risk capital to achieve financial sustainability.

TWO COMPONENTS OF HUSK POWER REQUIRING INNOVATION IN FINANCING

Husk Power University

To accommodate the hundreds (and soon, thousands) of new operators and managers entering the company, Husk Power is creating a centralized training facility, dubbed Husk Power University (HPU), which will deliver capacity-building content through video, e-learning, and lectures by technical experts. HPU will be unique in the world in providing this kind of specialized training, which will guarantee graduates a job at HPS, along with long-term career prospects.

Rama Siva, who heads this initiative out of Patna, Bihar, has plans for the university that extend far beyond Husk Power. Given the general skills gap that currently exists in Bihar, a state with a population over 90 million, HPU has the potential to become an accredited provider of technical diplomas and certificates for the wider population. The willingness of locals to pay for an education at HPU will partly be a derivative of the scale and credibility that Husk Power achieves, but it will largely be a function the company becoming a government-certified educational institution.

The complexities of managing additional students who are not just Husk Power trainees could be offset by the benefits of increased revenue from a higher throughput paying to receive training. What began as a necessary division of Husk Power that was initially funded mostly by grants will soon become integrated into the wider business as a cost center paid for internally with equity funding, and it could well become a profit center in the years to come.

While Husk Power intends to invest over $1 million of its equity funding (alongside a Shell Foundation grant provision) over the next two years to establish HPU, there is a unique opportunity for education-focused donor funders and local government bodies to play a role in its financing. If developed as planned, HPU will likely be much more effective than most local educational institutions in turning unskilled seasonal laborers into a permanently employed workforce. Given the high level of social impact this specialized education will generate, we stand ready to work with scale-driven donor funders and government bodies alike to assist us in creating this institution.

Funding Husk Power's Scale-Up Partners

Husk Power's model—to "build, own, operate, and maintain" each plant—requires a large volume of workers at the ground level, including mechanics, plant operators, village collectors, trainers, cluster managers, and others. Given these resource requirements, scaling-up to hundreds of power plants will be difficult. A more viable approach to growth (and the one Husk Power has chosen) will be to adopt

a "build and maintain" (BM) model, where Husk Power only installs the technology and provides maintenance, and partner organizations own and operate the plants. These partner organizations, or "BM partners," will share some characteristics of a franchisee, as they will be purchasing an established business model and technology and will benefit from Husk Power's centralized training facility, HPU, as well as ongoing maintenance and technical support. However, it's unlikely in the short term that the BM partners will benefit at the ground level from the Husk Power brand, as it may not be recognized in the areas where BM partners will operate. BM partners could be a range of organizations, from larger energy companies looking to increase their rural penetration with appropriate technology, to individual entrepreneurs, to government-backed organizations.

The challenge, then, will be to develop a financing mechanism to attract a multitude of BM partners. It's likely that many potentially strong BM partners will only be able to provide portion of the capital requirement. A McDonalds franchisor, for example, would have little trouble securing a top-up loan in most parts of the world, as that revenue model is proven and understood by banks. Buyers of the Husk Power model, though, would be unlikely to enjoy this luxury, especially in India, where small and midsize enterprises (SME) debt is scarce and expensive, and the process to secure it is often fraught with bureaucracy. Our ability to innovate around a new financing mechanism for the remaining debt requirement of Husk Power's BM partners will play a deciding role in determining the success of the company's scale-up plan.

We can assume several things about this debt requirement:

- Loans would be considered uncollateralized by a local bank, as the power plants would likely be deemed to have minimal resale value
- The BM partner would be a for-profit organization (or at least able to take on debt)
- The loan amount would typically range from US$75,000 to $400,000 per BM partner
- A single standardized mechanism is required to avoid the scenario where a fresh financing mechanism needs to be developed for every BM partner, as this would cause significant delays and reduce the attractiveness of the package to potential BM partners
- The annual debt requirement would be US$2-$4 million, spread over multiple BM partners

Given these assumptions, there are a number of potential vehicles for addressing this debt requirement.

Guarantee facility with a local bank

In this option, a local Indian bank with national presence would pre-authorize loans to Husk Power's BM partners, enabled by a loan guarantee from a third-party organization (potentially a DFI, foundation, or government guarantee scheme such as the Credit Guarantee Fund Trust for Micro and Small Enterprises). The advantages of this option are that no new entity would need to

be established, capital availability would not be a constraint, and the local financial institution would assist in building track record for the model. The cost of debt and the guarantee fees combined may prove unattractive to the partner, however. It also may be difficult to translate a high-level agreement between the guarantor, the bank, and Husk Power with swift action on the ground, as lending decisions on the ground tend to be made independently by branch managers operating under an independent set of performance incentives.

Establish a financing division of Husk Power Systems

Similar to GE Capital or Tata Capital, Husk Power could establish its own financing arm, dedicated in this case to covering the finance requirements of its own BM partners. This may be necessary if alternatives don't materialize, but it is an unappealing option, as it would require establishing a separate legal entity (a nonbanking finance company)—a complex process that would require significant time and financial resource commitments. Moreover, it would force Husk Power to take on the credit risk of its BM partners.

Social impact bond

A further option could be to create a social impact bond dedicated to meeting the financing requirements of BM partners. Bondholders would receive a small annual yield (1-2 percent) not commensurate with the risk they would take on, though their overall return would be bolstered by the significant social impact generated. This would allow participation by multiple organizations, potentially boosting the chances of meeting the funding requirements. Crucially, it would improve the economics for Husk Power and its BM partners through decreased capital cost, and it would transfer the financing risk from the company onto organizations better structured to absorb it. However, time, cost, and Indian regulatory constraints may frustrate our ability to execute on this option.

Partnership with a local SME lender

Husk Power could also refer its partners to a local financial institution structured to lend uncollateralized to SMEs. This option would bypass the need for a guarantee and in principle could be the most sustainable option, as the loan risk would be matched with the capital provider's normal risk tolerance. In India today, such institutions are extremely scarce (IntelleCash and SIDBI are exceptions), however, and without clear guidance on the timing of the loans provided to individual BM partners, every new partner's merits would likely need to be considered independently. This option would also involve a high capital cost of at least 17-20 percent.

Grant-funded revolving working capital pool

This option would involve providing a ring-fenced grant to Husk Power, which would allow the company to offer extended credit terms to BM partners. The grant would be revolved indefinitely as BM partners covered their obligations. This would channel soft funding in a way that would directly support the development

of the energy sector, and it would clearly represent the lowest cost option for Husk Power. Negatives would include the added complexity involved in managing the pool, and the limited capital provision would restrict the scalability of this option.

IMPROVED COORDINATION BETWEEN FUNDERS

The above two examples illustrate the need to deploy a range of different funding instruments to catalyze Husk Power's scale-up efforts, and therefore the need for increased coordination between different types of funders.

For grant providers, increased coordination could mean providing a grant to an enterprise with a pre-identified, short-listed set of next-stage commercial investors. Having a commercial investor involved at the grant stage (as part of a steering committee, for example) would help ensure that the grant is used to prove the concept sufficient to attract that later stage investment, not to subsidize the product itself. The entrepreneur would benefit from greater clarity on the milestones needing to be met before pitching to commercial investors, and the investor would benefit from an enhanced pipeline.

For development finance institutions with larger minimum ticket sizes, increased coordination could mean providing loan guarantees to local finance institutions alongside grant providers and commercial investors.

For impact investors, increased coordination could mean sharing opportunities that are too early stage for them to invest, or that require assistance in building new markets in new geographies. For example, in partnership with the OPEC Fund for International Development, we are establishing a revolving working capital pool in select African countries that will unlock high-potential distribution partnerships for d.light, another Shell Foundation energy partner. The goal will be for this working capital pool to be financed in the future by d.light's existing commercial investors.

TWO NEW FINANCIAL INTERMEDIARIES FOR INDIA

In India, we have recently launched two financial intermediaries that are designed to address financial gaps in the market and to operate at the intersection between donor and commercial funding.

Accelerator for Seed-Stage Enterprises

Shell Foundation and First Light Ventures, a U.S.-based venture capital fund, have together launched the First Light India Accelerator, which will provide risk capital (up to US$400,000 per enterprise) and business development assistance to seed-stage enterprises that target low-income consumers in India. A dedicated local team with strong commercial experience will provide skills support to selected enterprises to prove their concept and seek the capital necessary to achieve scale. The Accelerator will act as a feeder to later stage commercial investors, thereby helping to address the "valley of death" between the concept "pre-investable" stage and commercial funding that plagues the social enterprise sector globally. We will

initially seek to do four deals this year of between $150,000 and $400,000, with approximate 18-month funding periods.

Commercial Debt

To help address the lack of commercial debt financing to SMEs in India, in late 2010 we launched a credit facility in partnership with IntelleCash, an Indian non-banking finance company. The facility is providing debt (less than $250,000/loan) tied to specific anticipated cash inflows. The facility was launched in 2010 and currently has a test portfolio of five companies, including Husk Power. The facility specifically targets small businesses that do not have three years-plus profitability or full collateral (that is, are not able to be served by banks), comprising the "missing middle" asset class. Employing lessons learned from our partner GroFin in Africa, we are aiming to create an independent business capable of attracting commercial funding for scale.