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# How do energy policies accelerate sustainable transitions? Unpacking the policy transfer process in the case of GETFiT Uganda

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## **Abstract**

Energy policies play an important role in accelerating ‘sustainable transitions’ by enabling and incentivizing investment in electricity generation from renewable sources. Key policies such as feed-in tariffs, tradable permits and auctions were pioneered in OECD nations, notably within the European Union, and in recent years have been the subject of donor-funded projects to transfer such policies to lower-income countries. However, within the wider transition studies literature, there is a lack of detailed understanding regarding the process of *how* this policy transfer takes place in the renewable energy sector. Our research addresses this gap by analyzing the micro-politics and actor-strategies by which the GETFiT program was implemented in Uganda. In particular, we focus on the interplay of transnational and national actors in pursuit of specific policy objectives. Informed by case study method and qualitative research, we employ theoretical perspectives, archival data sources and semi-structured interviews to adapt the policy transfer framework to the agency perspective of policy translation. We find that transnational influences, resource flows, local embeddedness, and institutional resilience are all necessary prerequisites for a coherent policy outcome. Moreover, this study opens up an avenue of research into co-creation processes and relational perspectives in sustainability transitions.

**Keywords:** *actor coalitions, actor strategies, policy transfer, policy translation, energy transitions*

## 1. Introduction

International efforts to mitigate climate change have primarily been led by industrialized frontrunner countries, such as Germany and Denmark. The United Nations Framework Convention on Climate Change (UNFCCC) mandates that such mitigation measures must also be pursued by the less-industrialized, low-income countries (Popp, 2011, Wei, 1995), such as through technology transfer (Desgain and Haselip, 2015). The Paris Agreement (2015) adopts a more *bottom-up* approach, within the UNFCCC structures, allowing for voluntary pledges and contributions by both developed and developing countries (Cléménçon, 2016, Dimitrov, 2016). Non-OECD countries, such as India and China, contribute an increasingly high share to global greenhouse gas (GHG) emissions and are also leading manufacturers of low-carbon technologies (Zhang and He, 2013, Gosens and Lu, 2014, Sahoo, 2016). Unlike normal market processes, the uptake of low-carbon technologies must happen at a faster pace if the world is to close the emissions gap (Kalkuhl et al., 2018). Low-income African countries have an increased potential to industrialize on the basis of renewable energy (RE) technologies as opposed to the conventional sources. While there has been a significant preoccupation with technology transfer (De Coninck et al., 2007, Murphy et al., 2015, Schneider et al., 2008), such transfer processes are enabled through factors such as incentive frameworks, supportive policies and market creation, among other state-led interventions.

The field of sustainability transitions is relevant here as it analyses how the complex interplay of technology, policy, institutions, markets, and society co-evolve and influence each other while being enmeshed within political economy (Ockwell and Mallett, 2012). Such interlinked processes are fundamental to catalyzing low-carbon development (Geels, 2010, Raven et al., 2012, Verbong and Geels, 2010). A key requirement for sustainable transition is the *redirection and acceleration of technological change* for which policies play an important role (Rogge and Reichardt, 2016). Within transition studies, reaching a better understanding of the policies and politics presents an emerging research agenda (Markard et al., 2012, Rogge and Reichardt, 2016). Much of the thinking in this field builds on the acknowledgment that policies are key to shaping transition trajectories through regulations, subsidies, incentives etc. As a result, scholars have undertaken systematic studies to analyze the politics of policy-making processes, such as the role of political coalitions in energy transitions in the US (Hess, 2014), advocacy coalitions in Swiss energy policy (Markard et al., 2016), and policy networks in Norwegian energy transitions (Normann, 2017). They have employed prominent and classical frameworks such as advocacy coalition framework, multiple streams approach, punctuated equilibrium theory, discourse coalition framework and policy networks approach. Further, it has been increasingly recognized that a multiplicity of instruments, unlike the focus on single instruments previously, are needed to foster low-carbon transitions. As a result, scholars have developed analytical conceptualizations of ‘policy mixes’ and applied them empirically in various

Western contexts (Kivimaa and Virkamäki, 2014, Rogge and Reichardt, 2016, Kivimaa and Kern, 2016, Rogge et al., 2017, Edmondson et al., 2018, Reichardt et al., 2016). Markard et al. (2016) note that transition studies are just beginning to pay more attention to the “political circumstances that make the adoption of such policies likely”. Kern and Rogge (2018) argue that transition scholars have so far made limited use of policy process theories and have limited understanding of the politics in policy processes. Based on a review of the studies employing policy frameworks in sustainability transitions, Kern and Rogge (2018) identify two shortcomings, which include the continued focus on single policy instruments, and the neglect of the linkage between policy outcome and socio-technical change.

We contribute to this emerging research agenda by focusing on *how* policies lead to socio-technical change by analyzing policy process and employing a ‘policy translation’ approach. Policies in the context of sustainability transitions are unique, as they are geared towards speeding up the deployment of low-carbon technologies and mitigating climate change. However, a significant element of the policy processes is the international movement and adaptation of policies (Oberthür and Tänzler, 2007, Paterson et al., 2014, McCann and Ward, 2013, McCann and Ward, 2012, Stone, 2017), specifically in the context of developing countries. This has received limited attention within transition studies. In this paper, we focus in particular on how policies are transferred in specific developing country contexts, and the political dynamics it entails. This also links to the transition processes in the global south, which typically pose unique challenges and complexities that are different from their counterparts in the global north. These include weak institutional arrangements, less efficient bureaucracies, higher economic and political instability, and socio-economic inequality (Hansen et al., 2017, Ramos-Mejía et al., 2018). There is limited evidence on the dynamics of how renewable energy policies are transferred to developing countries, such as Sub-Saharan Africa (SSA), and how that triggers further socio-technical change.

Since the early 1990s, the European Union (EU) has positioned itself as a pioneer in climate change mitigation policies (Oberthür and Tänzler, 2007). Germany was the first European country to adopt a Feed in Tariff (FiT) program in 1991, followed by Denmark and Spain (Jacobs, 2016). FiTs have been structured in a number of ways and since early 2000s, there has been a shift from value-based to cost-based FiT programs, and from variable to fixed-rates, with long-term certainty (Jacobs, 2016). This served as a catalyst for RE growth not only in Europe but also worldwide. Lately, however, renewable energy auctions (RAs) have become popular, being adopted by 9 countries in 2009 to 44 countries by early 2013. RAs are market-based competitive bidding schemes, where typically a certain amount of power (megawatts-MW) of renewables are offered for bidding to project developers, with the assumption that competition will lead to reduced tariffs (Eberhard and Kåberger, 2016, Alvarez et al., 2017). This significant interest in RAs is driven by increasing maturity of technologies (such as wind and solar) and a rapid decline in the costs

(IRENA, 2018). The number of countries adopting FiTs and RAs were 80 and 67 in 2017 (IRENA, 2013, IRENA, 2018). In Africa, there has been a growing interest to deploy policies that enable investment in renewables. Illustrative examples include adoption of FiTs by South Africa, Kenya, Uganda, Tanzania, and Rwanda (Eberhard, 2013, Mendonça, 2009, Nganga et al., 2013) and RA schemes in South Africa, Uganda and Zambia (Eberhard and Kåberger, 2016, Meyer et al., 2015, Winkler et al., 2018).

This article examines how market-oriented policy instruments (FiTs and RAs) were transferred in Uganda in the period between 2010 and 2015, by employing the framework developed/proposed by Dolowitz and Marsh (Dolowitz and Marsh, 2000), and linking it with a ‘policy translation’ agency perspective (Stone, 2012, Mukhtarov, 2014) to study socio-technical change. We are interested in “action-oriented intentional activity” (Evans and Davies, 1999), and how knowledge about policies and administrative arrangements in one context are used to develop policies elsewhere. For this, we focus on analyzing the specific actor constellations through which the process was facilitated, and highlight their roles and strategies in mediating and shaping the resulting outcomes. In addition, we describe how policy transfer became part of ongoing political negotiation processes, which involved significant re-configuration, modification and further development of the *imported* policies within the national context. This article is informed by primary research and aims to illuminate the policy processes by employing the case of RE policies in an under-researched empirical context, while illustrating the roles and agency of national and transnational actors. The research question guiding this article is: *How did the actor constellations translate RE policy (case of GETFiT) and accelerate transitions within the specific political and institutional context of Uganda?*

In the following section, we elaborate the analytical framework. In section three, we classify the approach and strategies of policy entrepreneurs, drawing on theoretical concepts, in-depth interviews and archival data. Section four presents a background of the electricity sector and the history of FiT, followed by section five, which presents the main empirical and analytical findings. The final section reflects on the policy process and what it implies for sustainability transitions, followed by concluding remarks.

## **2. Policy Transfer and Translation**

### **2.1. The Conventional Policy Transfer Approach**

This article draws on the literature on policy transfer, which emerged in the 1980s from the field of comparative policy studies. The concept of policy transfer is understood in the literature as “a process by which knowledge of policies, administrative arrangements, institutions and ideas in one political system is used in the development of similar features in another” (Benson and Jordan, 2011). The literature on policy diffusion is considered to be complementary to policy transfer. Both transfer and diffusion processes share

the assumption that “governments do not learn about policy practices randomly, but through common affiliations, and institutional membership” (Simmons and Elkins, 2004). The mechanisms for policy transfer have been recognized to be either ‘voluntary’ or ‘coercive’ (Dolowitz and Marsh, 2000). Voluntary policy transfer implies that countries or policymakers willingly adopt policies by way of learning, emulation (Bennett, 1991, Simmons and Elkins, 2004), ‘hybridization’, ‘synthesis’, ‘inspiration’ (Rose, 2005) and/or ‘lesson-drawing’ (Haas, 1992, Common, 2004, Stone, 2001, Rose, 1993, Rose, 2005). On the contrary, coercive transfer implies pressured adoption of policies, imposition of norms or standards by direct means or indirectly through conditionality obligations resulting from transnational policy externalities (Stone, 2017, Benson and Jordan, 2011, Stone, 2001).

A major preoccupation of this field has been the question of whether and why different countries develop similar policies over time. While diffusion and transfer are concerned with process patterns, policy convergence is associated with outcomes (Knill, 2005). Since the 1990s, policy convergence has mostly been associated with the phenomenon of liberalization (Simmons and Elkins, 2004) and opening up economies to global market forces. Among transnational organizations and global financial institutions such as World Bank (WB) and the International Monetary Fund (IMF) (Stone, 2004), this can be linked to the structural adjustment reforms introduced in developing countries, with conditions of privatization and market-oriented policies (Pauly, 2018, Haggard and Kaufman, 2018). It is important to note these macro-level ideas and global processes that have steered sector-specific policy and governance regimes in various national contexts, leading to diverse outcomes (Haselip and Hilson, 2005, Haselip and Potter, 2010).

The literature on policy transfer has evolved from being state-centric to encompassing transnational and non-state actors (Benson and Jordan, 2011), from being used to study social welfare policies (education, health) to encompassing a wide range of issues such as environmental (Betsill and Bulkeley, 2004), and also from being empirically situated in the US and Europe to Australia and Asia. A conceptual framework which gained the most traction for analyzing policy transfer was developed by Dolowitz and Marsh (Dolowitz and Marsh, 2000), hereby referred to as the DM model. It was envisioned as a heuristic framework. The DM model is based on six key analytical questions that support the systematic assessment of the policy transfer process, which are: *Why do actors engage in policy transfer? Who are the key actors involved in the policy transfer process? What is transferred? From where are lessons drawn? What are the different degrees of transfer? What restricts or facilitates the transfer process? How is the policy process related to policy success or failure?*

## 2.2. A Newer Understanding of Policy Transfer

The DM model has subsequently been reworked, mainly by sociologists and geographers (Benson and Jordan, 2011, Evans, 2009, Peck and Theodore, 2010, Stone 2004). The conventional model has been questioned for its assumptions of being a straightforward, linear and apolitical process (Temenos and McCann, 2013, Benson and Jordan, 2011). The model has also been questioned for treating policy ideas like artefacts that remain unaltered in the process of being transferred from one polity to another (Temenos and McCann, 2013). In contrast, the newer approach understands policy transfer processes as inherently political in nature, and deeply embedded within the institutional fabric of economy and society, subject to interpretation and selective uptake (Radosevic, 1999, Shin, 2013, Mathews, 2002). The concept of ‘policy translation’ captures this understanding (Jones et al., 2014, Mukhtarov, 2014, Stone, 2012, Stone, 2017), and is also an umbrella term for a set of new concepts such as ‘policy assemblages’, ‘bricolage’, ‘mutations’, ‘mobilities’ (McCann and Ward, 2012, Peck and Theodore, 2010, McCann and Ward, 2013, De Jong, 2013) and ‘localization’ (McCann and Ward, 2012). These concepts identify policy processes as uncertain and complex, involving multiple iterations of problem framing, and multi-scalar actor networks (McCann and Ward, 2012, McCann and Ward, 2013). The emphasis is on agency and scale, drawing on the relational and constructivist approaches (Evans, 2009).

Policy translation takes an agency-centric approach, paying explicit attention to actors and strategies in the process of the travel of policy ideas (Mukhtarov, 2014, Mukhtarov et al., 2013). Similar to Stone (2008), Mukhtarov (2014), and drawing on McCann and Ward (2013), we *follow* the actors as they engage in *situations* with specific policy ideas and objects by framing and modifying their embedded texts, meanings and constructions. In doing so, we draw inspiration from research adopting an actor-oriented approach to policy transfer, including those focusing on specific actor roles such as policy entrepreneurs (Huitema and Meijerink, 2010), transnational corporations (Stone, 2004), and policy networks (Stone, 2008). Particular attention has been paid to ‘policy entrepreneurs’ (Huitema and Meijerink, 2010, Baumgartner and Jones, 2010) as they play a significant role through the policy-change process (Brouwer and Biermann, 2011, Mintrom, 2000). Similar parallels can be drawn to the notion of ‘frontrunners’ in transition studies (Rotmans and Loorbach, 2009). We refer to key policy actors as *policy entrepreneurs* because of their agency and leadership in steering the process. These ‘policy entrepreneurs’ share a common willingness to invest their resources (time, knowledge etc.) in policy change and possess good networking skills (Kingdon and Thurber, 1984). Thereby, policy entrepreneurs can be distinguished through their desire to significantly change the established ways of doing things (Mintrom and Norman, 2009). In this paper, while we identify the individual policy entrepreneurs, we also discuss the collective policy entrepreneurship as they draw on

respective knowledge, skills, networks and strategies (Meijerink and Huitema, 2010). The strategies employed by these policy entrepreneurs will be discussed in the next section.

We base our analysis on the core DM model. However, we modify and adapt it to include the policy translation approach, and factor the newer understanding within the analysis. While we acknowledge that actors are only one of the six dimensions within the DM model, however, in our analysis, we integrate actors within each of the dimensions and in sum explore five questions. Further details on the adaptation of the DM framework are provided in Table 1.

**Table 1 - Adaptation of the DM framework**

<b>Policy Transfer (DM model)</b>	<b>Adapted Policy transfer</b>	<b>Further explanation / Remarks</b>
Why do actors engage in policy transfer? Who are the key actors involved in the policy transfer process?	Who are the key actors? How do they get involved? What motivates the actors to engage with policy transfer?	In addition to addressing the questions raised by the DM model, we also ask how do these actors come together in the first place, what kind of networks and connections do they tap into, and how inclusive or exclusive are these sets of actors. Further, we engage with the motivations of the actors, and the organizations or ideologies they represent, in addition to identifying who they are.
What is transferred?	Which policy objects do the actors choose to transfer? Why?	First, instead of framing the question in a neutral way, we frame it by providing agency to policy actors in being selective and ‘choosing’ the policy objects. Second, in the context of GETFiT, we attempt to also answer why do they do so, relating it to instrument affinity, market-based ideologies etc. Third, we engage with the influences of development agencies and the interplay of transnational knowledge vis-à-vis local agency. However, the notion of direct ‘transferability’ is limited here as the specifics are more complex, messy and constantly evolving.
From where are lessons drawn?	From where do the actors draw their ideas, experiences, and lessons? Why are certain lessons drawn?	In addition to the question of where lessons are drawn from, we also engage with the questions of why are certain experiences and lessons drawn? Moreover, implicit in this is also the question of how actors engage in adopting and/or changing ideas drawn from elsewhere.
What are the different degrees of transfer?	We do not include this question in our adapted framework.	Policy transfer can typically involve one or more degrees of transfer: copying, emulation, combinations of both, and inspiration, hybridization etc. Instead of using a certain category rigidly, we focus on elucidating the process instead and also engaging with this better as part of the next question.
What restricts or facilitates the transfer process?	How do actors translate the policy process?	Instead of framing the question in an antagonistic and binary way, we simply attempt to elucidate the process as is, particularly focusing on the political context within which actors are operating. Policy translation allows us to conceptualize actors’ behavior within a wider political discourse. The process is non-linear and highly contingent to the specific institutional and political circumstances, unlike a mechanistic and linear transfer process. Further, constraints and opportunities are



		socially and politically constructed, and are relevant only within a specific context.
How is the policy process related to policy success or failure?	What outcomes do the actors envisage? And do they achieve them?	Instead of engaging with an abstract notion of ‘success’ or ‘failure’, we link our question back to the actors in terms of what did they envisage, how did they perform vis-à-vis their targets or goals.

*Source:* Authors’ own elaboration; taking inspiration from Mukhtarov (2014)

In line with Stone (2004), we take the view that the intentionality of actors, their agency, the wider socio-political context, and the specific network of transfer agents are central to understanding policy processes. Therefore, we illuminate the key roles played by transnational and national actors.

**3. Methodology**

**3.1. Case of Accelerating Transitions through Policy Translation**

The case of Global Energy Transfer Feed-in Tariff (GETFiT) Uganda is a relevant example of the general pattern observed in global governance systems for RE, which are increasingly converging towards market-based policy instruments such as FiT and RAs (Haselip, 2011, IRENA, 2013). Uganda was the first country in Africa to unbundle electricity generation, transmission, and distribution into separate utilities, and to offer private concessions and open the sector to independent power producers (IPPs) (Eberhard et al., 2016). Lately, Uganda has received international recognition for having created a conducive investment climate for power generation (Eberhard et al., 2016) and was among the first in Africa to introduce FiT and RA policies (Meyer-Renschhausen, 2013). The GETFiT program has attracted many small IPP investments, including competitive bids for hydropower, biomass and solar PV. After South Africa, Uganda has the largest number of IPPs in SSA, and is “the only other competitively big, grid-connected solar PV program” (Eberhard et al., 2016). Even so, Uganda has been overshadowed by the academic attention given to countries such as South Africa and Kenya. The specific actor constellations, the particularities of the national context, and the positive policy outcomes makes the case of Uganda important.

**3.2. Data Collection and Analytical Procedures**

Focusing on the history of FITs and RE Auctions in Uganda (2010-2015), this article investigates how global policy ideas are translated and localized. For this, we employed a case study approach and undertook qualitative research to uncover the process, the actor strategies and the dynamics thereof (Yin, 2009). A case study design is appropriate for this research as it allows for an in-depth study of micro-level processes and illuminates important contextual conditions of relevance to the phenomenon under study (Yin, 2013).

And a qualitative research approach is suitable for this as it allows for process-related questions, detailed narratives, and understanding of motivations and strategies of heterogeneous actors (Eisenhardt and Graebner, 2007, Langley and Abdallah, 2011). The policy mobilities approach comprises interest on ‘small p’ politics and ‘small p’ policy-making, giving primacy to individual actors and practices (McCann and Ward, 2012). It emphasizes a closer look at the changed meanings, experiences and power relations with mobility, and the ways these entangle with local contexts (McCann and Ward, 2013). We draw inspiration from the ethnographic form of enquiry and study into micro-politics.

A purposeful sampling strategy was devised to identify the key actors involved with the transfer of the FIT and RA policies to Uganda. According to Yin (2011), purposeful sampling refers to “the selection of participants or sources of data to be used in a study, based on their anticipated richness and relevance of information in relation to the study’s research questions”. Based on secondary material, we identified three potential interviewees. Subsequently, other interviewees were identified based on snowballing technique (Atkinson and Flint, 2001). The actors directly involved in the process were interviewed, and additional interviews were conducted with those actors supporting the program and/or involved in part. This led us to perform a total of fourteen (14) semi-structured interviews in 2017 and 2018 with a range of actors (see Annex I). From the interviews and secondary data, a timeline of historical events since 2005 was developed, the key actors identified, and their roles, interests, and strategies analyzed. Interview guides were prepared (see Annex II) which aimed at operationalizing the main elements from the framework described above. To verify the information obtained from interviews, several archival documents were analyzed including journal articles, GETFiT annual reports, brochures, policy briefs, World Bank (WB) documents, consultancy reports and conference presentations.

Following the framework presented in Table 1, the analysis was completed by summarizing and interpreting the data by identifying themes and emerging patterns (Braun and Clarke, 2006). We used a combination of both deductive and inductive approaches. The process required constant iteration between analytical concepts, themes, and the summarized empirical data, checking for alternative explanations and drawing theoretical insights for developing a rich case narrative (Klag and Langley, 2013). Prior literature was used to analyze thematic overlaps and validate them with theoretical interpretations (Gioia et al., 2013). The data analysis structure is presented in Table 2. The analytical framework represents the key dimensions of policy process inquiry as per the DM model.

**Table 2 - Data analysis structure highlighting the relationship between the analytical framework and the empirical data**

<b>Analytical Framework</b>	<b>Sub-themes compiled from the literature</b>	<b>Examples from empirical data</b>
Who are the key actors? How do they get involved? What motivates the actors to engage with policy transfer?	Exogenous factors, economic pressures, sectoral problems, political pressures, aspirational, business interests, preference or vested interest to promote certain solutions/models, spreading best practices, harmonization of political systems	The circumstantial factors include: energy supply shortages, failure to license projects in FiT-I and II, need for renewable energy in the electricity mix, and need for private sector. The actors developed new ideas to find solutions. The main motivations of actors included: diversifying energy mix, increasing energy supply, strategic business partnerships, leadership aspirations, advancing common ideologies and beliefs, promoting new models etc. We focus on capturing all types of actors engaged in policy making.
How do actors translate the policy process?	Developing ideas, gaining legitimacy, identifying instruments, seeking expert advice and consultants, but mostly mechanistic and linear, with prescriptive guidelines	Developing new ideas of FiT premium and risk mitigation, forming a small coalition of actors, defining common goals and values, sharing policy instruments affinity, mobilizing donor support, gaining legitimacy and support within the Ministry, and securing finances. Further, the process involved knowledge and expertise of transnational actors, experiences of multi-donor programs, and entailed negotiations, compromises, adjustments.
Which policy objects do the actors choose to transfer? Why?	Policy goals, policy content, policy instruments, policy programs, institutions, ideologies, ideas, attitudes and negative lessons.	The policy goals per se were set in line with the renewable energy policy of the country. The policy instruments, program design, institutional arrangements, ideologies, and ideas were transferred. This included: FiT and RA policy, risk mitigation product, simplifying regulatory procedures, institutional capacities, market ideology.
From where do the actors draw their ideas, experiences, and lessons? Why are certain lessons drawn?	Drawing lessons from other political systems, national governments and/or sub-national governments. Also, from policy networks, workshops and conferences, working groups, expert committees etc.	The actors drew a significant number of lessons and experiences from previous risk mitigation donor programs, experiences of international consultants, energy experts, and also through various platforms of knowledge exchange such as conferences, workshops, and also based on documents and reports on policy evidence. The international donor networks played an influential role, manifesting donor practices and ideology, and privileging transnational agency.
What outcomes do the actors envisage? And do they achieve them?	Policy outcomes in the form of 'success' or 'failure'. Exploring whether it was an uninformed, incomplete or inappropriate transfer with regard to failure.	In this, we measure policy outcomes in the form of the envisaged project outputs, targets and goals in the form of the total number of projects implemented, institutional capacities built, risk mitigation products offered, and how they enhanced the legitimacy of regulatory institutions and simplified regulatory procedures etc.

Source: authors' own compilation

An agency perspective refers to the "ability to exercise authority and influence policy change" (Eisenhardt, 1989, Dharwadkar et al., 2000). This entails studying individual and collective policy actors (Mukhtarov et al., 2013) and their actions in influencing policy events (Stripple and Pattberg, 2010). The policy entrepreneurs in our case employ various strategies to pursue policy change. Huitema and Meijerink (2010) suggests a framework in which policy entrepreneurs engage with five strategies: coalition building, networking, venue shopping, idea generation, and using windows of opportunity. Building on this, we operationalize the strategies of policy entrepreneurs in our case. Table 3 provides details of the strategies employed by policy entrepreneurs and their relation with the examples identified in the empirical data.

**Table 3 - Data Analysis structure for strategies of policy actors in the transfer/translation process**

<b>Actor Strategies</b>	<b>Analytical Sub-themes</b>	<b>Examples from empirical data</b>
Development of new ideas	Policy change requires development of an idea; policy innovation, visions, and an agenda	Idea of FiT premium; incentives to support the enabling environment, more importantly the development of GETFiT which was in response to a larger problem of FiTs in developing countries. This was mainly developed by DB in consultation with international experts in energy finance; largely led by an ideology of privatization and market-led investments.
Build coalitions and sell ideas	Collaboration among policy actors as necessary, coalition building, differences and power asymmetry among actors, framing narratives, jointly developing a fresh agenda and vision, shared beliefs and agreements on how to use resources for common goals	Forming a coalition among the small set of policy entrepreneurs, setting common goals, and shared beliefs. Meetings with donors and development agencies to pitch new ideas and seek financial support, also to gain legitimacy within the donor network. This strategy was mainly employed by KfW to gain donor support, and by ERA to gain support from within Ministry and other stakeholders.
Recognize and exploit windows of opportunity	Windows are particular moments in time that offer opportunities for policy entrepreneurs to launch and gain support for new policy proposals, linking solutions to problems, to make it palatable for decision-makers, networking and gaining support and legitimacy	Supply shortage, lack of private sector investments, no projects licensed in previous FiT, and lack of an enabling framework. These provided the platform/windows of opportunity and new ideas were developed by ERA and KfW, and subsequently linked to GETFiT. The strategy of stakeholder engagement and networking esp. with a range of government stakeholders was mainly employed by the GETFiT consultant in coordination with ERA staff. The program elements had to be constantly adapted by the policy entrepreneurs collectively to make it relevant to the context.
Recognize, exploit, create, manipulate multiple venues	Creating and exploiting opportunities in an institutional context, political, financial and administrative venues, inclusion and exclusion of actors, institutional structures and	By the time the new set of ideas were developed, the institutional context had opened up to the idea of small-scale renewables given the energy vulnerability and insecurity that existed. Hence, the political and administrative avenues were generally open to the ideas for a better policy, including financial and non-financial

	individual strategies; availing of existing venues, changing, altering venues, and/or creating venues	incentives. However, issues such as tax reforms turned unfavorable for the private sector promoted by this policy, and several negotiations and discussions by KfW advisor, GETFiT consultant, and an external legal firm led to bypassing the issues.
Orchestrate and manage networks	Coalitions are characterized by agreements on policy ideas or objectives; networks are a broader range of actors relevant to solving issues/or possess intellectual resources; creating and maintaining policy networks, close-knit and well-aligned, or short-lived.	The design of GETFiT structure involved a broader range of actors/experts in various committees to solve the problem of inadequate private sector investments in renewables in the developing countries. During the policy development, this strategy was employed in a number of instances: i) issue-based (risks to investment) support mobilizing private sector stakeholders; ii) finance-based support mobilizing donors and mobilizing additional funds based on new issues (solar PV, transmission infrastructure) etc.

Source: Structure is adapted from Huitema et. al. (2010)

These strategies can be aggregated into three broad categories i.e. scale-based, meaning-based and context-based, as developed by Mukhtarov (2014). This corresponds well with the way policy processes are shaped: i) scale-based: developing new ideas across multi-sites, mobilizing actors across scales, coalition building; ii) meaning-based: framing ideas and policy components within the global climate discourse; gaining legitimacy within the donor community; iii) context-based: actor dynamics within the local context, negotiations with government officials; appeasing and lobbying. We incorporate these elements in the progression of the policy process, and for analysis within the structural dimensions of the DM model.

**4. Contextual Background: Feed-in-Tariffs in Uganda (2005-2010)**

The history of FiT policy can be traced back to the RE policy, formally adopted in 2007. FiTs were explored, at the time, as a possible means to accelerate private investment in renewables. In line with the structural reforms initiated by WB and IMF globally, Uganda’s electricity sector underwent reforms and restructuring in the late 1990s. These reforms aimed at privatizing and liberalizing the sector, including opening up the energy supply market to IPPs (MEMD, 2014). By 2005, the Uganda Electricity Board was unbundled into separate entities for generation, transmission, and distribution. It is important to note a number of major events and political processes at the national level that shaped this policy environment, including a series of major droughts from 2005-2007 which exposed the country’s vulnerability from a sole reliance on hydropower.

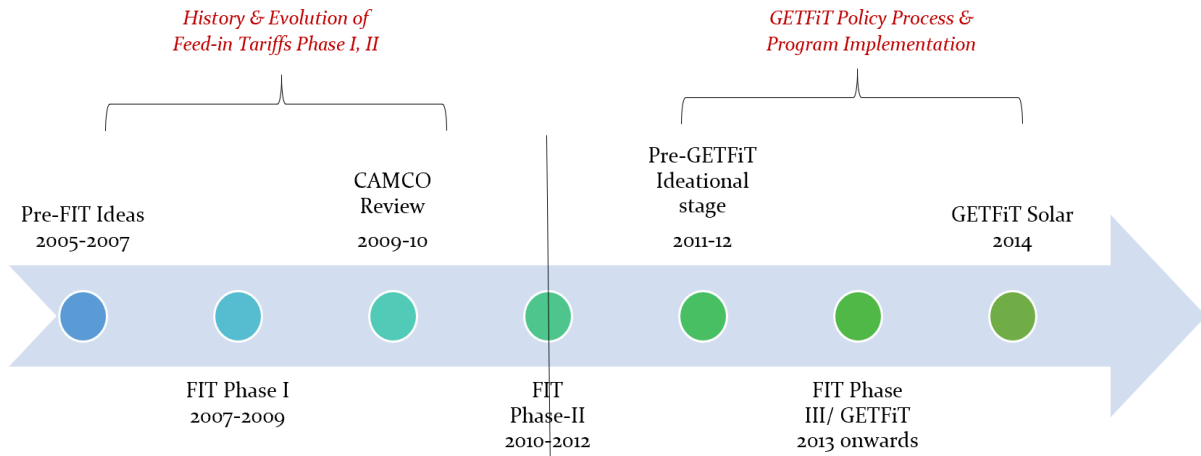
The government was forced to use emergency thermal power as a temporary measure (EMAConsultLtd, 2006). However, this was expensive, and “it led to end-user tariffs being increased by 12%”.<sup>i</sup> The high diesel generation costs, combined with peaking oil prices, the weak financial position of the power off-

taker i.e. Uganda Electricity Transmission Company Limited (UETCL), and a shortfall in the electricity supply led to an urgent need to diversify the energy supply sources and to exploit the country's RE resources (Meyer et al., 2018). The Electricity Regulatory Authority (ERA) received unsolicited bids for mini-hydropower projects, but they lacked a framework to support small IPPs<sup>ii</sup>. The ERA leadership looked outwards, and began investigating energy policies and mechanisms used elsewhere. They researched the global experience with FiT, especially in Germany, Brazil, Sri Lanka and Spain<sup>iii</sup>. Their search was geared towards finding examples of countries which had hydro and co-gen technologies, and had adopted FITs, and assessing their applicability to Uganda<sup>iv</sup>.

According to ERA, the rationale for introducing FIT in 2007 was to address the need for greater clarity and certainty for the private sector, a standardized process, and a stable and transparent tariff regime. FiT Phase I (2007-10) was designed exclusively for hydropower, involving fixed-tariffs and long purchase periods. However, no projects were licensed under FiT-I<sup>v</sup>. Expressions of interest (EoIs) were mainly received from speculators who were testing the government's willingness to licence expensive projects, thus submitting inflated proposals<sup>vi</sup>. This period (2008-10) also coincided with a downturn in the Ugandan economy, marked by high inflation rates and oil prices escalating and peaking during 2007-08. The FiT-I created a steep learning curve for the ERA to understand the role of FITs and how they relate to – and are affected by – wider macro-economic variables. The economic and revenue currency exchange risks were a fundamental concern in the eyes of private investors, which also resulted in their lack of interest<sup>vii</sup>.

The electricity market underwent further turmoil during 2010-11 as Uganda experienced its peak load shedding and power supply crises due to consecutive droughts, unanticipated electricity demand growth, and delays in the finalization of the 250 MW Bujagali dam. In an attempt to continue seeking private investments, ERA launched FiT Phase II in 2010. Given that phase-I did not lead to any licensed projects, ERA had to re-think its strategy, for which it employed a consultancy firm (CAMCO) to study the established cost structure and applicable FiTs for Phase II (Curren et al., 2010). This phase entailed higher tariffs, newer technologies (biomass, biogas, geothermal, solar and wind), and capacity cap of 20 MW. Despite this, deeper sectoral problems remained, linked to the constraints of cost-reflective tariffs, high financing and project development costs, investor risks and lengthy regulatory procedures. One year into phase-II, the FiT rates had not achieved the risk-adjusted returns on private capital and did not attract equity investors. In parallel to FiT during 2010-11, ERA packaged a proposal to its development agencies, such as the German development bank (KfW), which eventually became the GETFiT program. The nature of these interventions is discussed in the next section (Section 5). A timeline of key events has been presented in Figure 1 below.

**Figure 1 – Broad Timeline of RE Policy Development in Uganda**



Source: authors' own compilation

## 5. Development of GETFiT Uganda (2010-2015)

This section analyzes the policy translation process for GETFiT in Uganda between 2010 and 2015. We employ the adapted DM framework to analyze the policy process, with a specific emphasis on the actors, agency, and strategies. This also includes analytical reflections in relation to the empirical findings.

### 5.1. Who are the key actors? How do they get involved? What motivates the actors to engage with policy transfer?

In parallel to FiT Phase II, the then CEO of ERA realized that tariff changes per se will not work, and he “looked at the overall policy environment to see what could be inhibiting the private sector participation”<sup>viii</sup>. This led to the beginnings of a new idea to provide financial incentives over and above the FiT rates, and also address non-financial risks. He discussed this with the Permanent Secretary (PS) of the Ministry of Energy and Mineral Development (MEMD), and approached KfW’s former Energy Sector Development Advisor (based in Kampala), a professional contact “active and knowledgeable in the field”<sup>ix</sup>. Representatives of ERA, KfW and sector experts undertook a structured assessment to identify “the missing pieces for projects proposed on paper.... getting them to financial closure and to construction stage”<sup>x</sup>. This process led to insights such as lack of bankable documents, low tariffs, and many perceived risks.

Meanwhile in 2009, the German development agency (GIZ) had undertaken a detailed study on small-hydropower in Uganda, as part of their Project Development Programme (PDP) in East Africa (Plas and Kyezira, 2009). The program promoted business partnerships between German and East African companies

through “strategic market development and linkage of the renewables – Made in Germany – initiative, focused on local industry dynamics” (Plas and Kyezira, 2009). It is evident that there was a strong interest and commitment from KfW and the German Government to support small-scale RE projects in Uganda.

Concurrently, new ideas around FiTs were mooted to KfW Frankfurt by the Vice President (VP) and the then Lead Analyst of GETFiT concept at Deutsche Bank (DB)<sup>xi</sup>. GETFiT was developed by DB for the Advisory Group on Energy and Climate Change of the Secretary General of the United Nations (DBCCA, 2010, Rickerson et al., 2013, Bank, 2011). It aimed to upgrade existing national FiT policies through a country-specific combination of up-front payments, performance-based payments, risk insurances and attractive debt finance conditions (Huenteler, 2014). GETFiT envisioned “a global program that includes public money to support and expand FiT in the developing world, and the adaptation of advanced FiT best practices to serve national goals for energy access and renewable energy scale-up” (Bank, 2011). The KfW Frankfurt office linked Deutsche bank VP to the KfW Advisor in Kampala, to strengthen professional ties.

The KfW Advisor in Kampala saw value in the GETFiT concept, as it resonated with the problems in Uganda. This led to the three actors/entrepreneurs coming together i.e. KfW Advisor, ERA CEO and VP DB. In mid-2011, their first meeting was held in Frankfurt, which also included the then Energy Advisor to PS MEMD. This meeting set the agenda formally towards developing a GETFiT Uganda program and creating an enabling environment. At this stage the objective was to fast-track the development of privately financed, main-grid-connected small renewable generation (hydropower, bagasse, and biomass) in Uganda<sup>xii</sup>. This was the first of many such meetings held in Frankfurt, operating in transnational fields, while being anchored in one nation. This also led to the actors agreeing on shared beliefs and making implicit agreements on how to mobilize individual capacities to achieve common goals. The process led to building a coalition of actors consisting of ERA CEO, KfW Advisor, VP DB, and an external consultant (who joined at a later stage)<sup>xiii</sup>. The VP DB was involved in an advisor capacity, based in Frankfurt, with occasional visits to Kampala.

In sum, a number of sectoral issues, combined with KfW, and the German Government’s interest in forging business partnerships and developing projects in Uganda, coupled with professional interests and leadership aspirations motivated the need for policy change. The key policy actors involved with GETFiT Uganda are presented in Table 4, comprising of four policy entrepreneurs and several supporting actors, and distinguishing between the various transnational and national actors.



**Table 4 - Renewable Energy Policy Actors relevant for GETFiT**

	<b>Policy Entrepreneurs</b>	<b>Supporting policy actors</b>
National Actors	Electricity Regulatory Authority, Uganda (ERA)	Government Agencies - Ministry of Energy and Mineral Development (MEMD); and Ministry of Finance (MoF)
Transnational Actors	Former KfW Energy Sector Development Advisor, Kampala Former Vice President, Deutsche Bank, Germany Former Consultant/Lawyer, Germany	Independent advisors/expert committee Multinational consultancy firm Development partners (DFID, NORAD, EU-Africa Infrastructure Fund) World Bank Governments of UK, Norway and Germany

Source: authors' own compilation

Table 5 provides a summary of the motivations of the actors, their intentions and the roles played. In addition, it also highlights the individual capacities or resources that they contributed to the process.

**Table 5 - Roles of transfer agents and their intentionality in policy translation**

<b>Who are the actors?</b>	<b>What were the actors' interests and intentions?</b>	<b>What capacities did they bring to the process?</b>	<b>What specific roles did they play?</b>
ERA CEO	<ul style="list-style-type: none"> <li>▪ Professional interest as a regulator</li> <li>▪ Leadership aspirations</li> <li>▪ Ambition to build a credible institution</li> <li>▪ Achieve policy goals, reduce energy insecurity</li> </ul>	<ul style="list-style-type: none"> <li>▪ Knowledge of the sectoral context and its problems</li> <li>▪ Insight into market's subsectors and their dynamics</li> <li>▪ Acting beyond political control and pressure</li> </ul>	<ul style="list-style-type: none"> <li>▪ Developing and strengthening ideas</li> <li>▪ Decision-making</li> <li>▪ Advocacy with the government</li> <li>▪ Facilitating communication and negotiation</li> </ul>
KfW Advisor	<ul style="list-style-type: none"> <li>▪ Professional interest as an energy advisor</li> <li>▪ Promoting KfW's and German Government's commitment to RE development</li> <li>▪ Enabling business partnerships</li> </ul>	<ul style="list-style-type: none"> <li>▪ Knowledge of the energy sector</li> <li>▪ Knowledge of the intent of the German government and their energy program</li> <li>▪ Wider understanding of policy, energy and geopolitics</li> </ul>	<ul style="list-style-type: none"> <li>▪ Designing the GETFiT toolbox</li> <li>▪ Gathering support of the donor community</li> <li>▪ Decision-making role</li> </ul>
VP DB	<ul style="list-style-type: none"> <li>▪ Opportunity to apply the concept in a specific country context</li> <li>▪ Individual drive to influence change</li> </ul>	<ul style="list-style-type: none"> <li>▪ Conceptual authority on GETFiT</li> <li>▪ Expertise on climate and sustainable energy finance</li> <li>▪ Insights into investment opportunities and transactions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Developer of the original GETFiT concept</li> <li>▪ Advisor on energy finance and tariff issues</li> </ul>
Government Ministries (Ministry of Energy and Finance)	<ul style="list-style-type: none"> <li>▪ Achieving policy goals</li> <li>▪ Reducing energy insecurity and vulnerability</li> <li>▪ Increasing energy supply to meet the growing demand</li> </ul>	<ul style="list-style-type: none"> <li>▪ Political support and political push</li> <li>▪ Financial, legal approvals and negotiations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Policy support</li> <li>▪ Budgetary/Administrative support</li> <li>▪ Legal, financial approvals</li> </ul>

External Consultant	-	<ul style="list-style-type: none"> <li>▪ Professional lawyer</li> <li>▪ Authority on the legal aspects such as contracts, conditions, agreements, criteria determination etc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Coordinator and administrative support</li> <li>▪ Designed the call for proposals</li> <li>▪ Managed stakeholder and public relations</li> </ul>
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**5.2. How do actors translate the policy process?**

The KfW Advisor recalled that GETFiT was developed as a generic concept, from a European standpoint, for developing countries<sup>xiv</sup>. But the concept had to be significantly adapted and localized to make it relevant for Uganda in ways such as identifying the top-up amounts, the funding sources and mechanisms, the risk guarantee options, and the technical assistance (TA) required to support ERA in the implementation.

In 2011, KfW Advisor and VP DB developed an official pitch document for GETFiT Uganda, with support from ERA CEO and MEMD. Having developed new ideas, the actors strategized to mobilize support and gain legitimacy among the donor community. In late 2011, this was presented to select development aid agencies working in Uganda and to the German government. In early 2012, a second round of meetings were held. Funding commitments were secured from the Norwegian Agency (NORAD), UK Dept. for International Development (DFID), EU-Africa Infrastructure Trust Fund (EU-AITF), and later by the German Ministry of Economic Cooperation and Development (BMZ)<sup>xv</sup>. In parallel, ERA undertook stakeholder meetings to engage with private investors to better understand their needs and expectations<sup>xvi</sup>.

During 2012, design ideas were formulated, top-up payments determined, buy-in from development partners sought, commitment to development finance secured, and ways to unlock commercial finance were devised. The initial plan was to develop 19 IPP projects with a combined capacity of 167 MW. The top-up donor-funded payment (or the GETFiT Premium Payment mechanism) was key to incentivizing developers/financiers to enter the market and supply electricity over a 20-year period. This was USDc 1.4/kWh for hydropower; USDc 1.0/kWh for biomass, and USDc 0.5/kWh for bagasse (Meyer et al., 2015). The process of determining these rates involved several iterations among actors, and also led to disagreements among the policy entrepreneurs (specifically KfW Advisor and ERA CEO) with regard to the tariff rates which private investors were willing to accept<sup>xvii</sup>. In consultation with KfW, ERA took a decision to increase the FiT for hydropower, thereby lowering the subsidy requirement, but justifying the criticality of donor funds<sup>xviii</sup>. A number of such modifications were made through the design process to reach common ground.

A key component of GETFiT was simplifying and streamlining the patchy enabling environment and removing legal and regulatory hurdles. This process entailed lengthy amendments and negotiations, and

delays (KfW and Multiconsult, 2014). There were disagreements with regard to the standardized documents and the risk allocation between IPPs and the government<sup>xix</sup>. An external law firm (Trinity International LLP) was contracted to support MEMD and ERA to review and standardize the Power Purchase Agreement (PPA), Implementation Agreement (IA) and Direct Agreements (DA) (KfW and Multiconsult, 2014). Additionally, a consultant (procurement lawyer) from Germany (an acquaintance of VP DB) was hired by KfW to join the core policy team by serving as the GETFiT coordinator and supporting ERA with procurements, managing tender rounds, and undertaking continuous stakeholder engagement<sup>xx</sup>.

Subsequent to a donor group meeting in Kampala, WB offered their product, Partial Risk Guarantee (PRG) to GETFiT. This was an insurance product geared to protect IPPs from the risk of delayed off-taker payments, termination risk, and such political and commercial risks (Meyer et al., 2015). This allowed the policy entrepreneurs (KfW) to reduce investor risks as part of GETFiT. The inclusion of WB and PRG was not planned but an opportunity that came up during the process. Despite the differences in the instrument preferences and ideologies between KfW and WB, they were driven by common goals of increased private sector investments and promotion of small-scale renewables<sup>xxi</sup>.

While there were such inadvertent inclusions of actors, there were also exclusions. The policy focus was predominantly on electricity generation, and they did not take UETCL on board from the beginning. This resulted in legal issues and misunderstandings at the stage of signing the transaction documents. The issue of grid integration of the IPP projects were not discussed. During 2013, it was identified that the hydropower projects were clustered in a mountainous region, which would exceed the grid capacity and threaten to overload the local substation. UETCL would have had to pay for idle generation and this issue could have led to major contestations and a near halt of the program<sup>xxii</sup>. The policy entrepreneurs (especially KfW staff in coordination with ERA) had to engage with the strategy of appeasing, political lobbying and managing stakeholder relations. This problem was eventually averted with the intervention of DFID by committing additional funds for strengthening and developing grid interconnection infrastructure<sup>xxiii</sup>.

The TA component for the program was developed, in close cooperation with ERA, to identify actual and emerging needs as well as capacity requirements over the implementation period. It focused on issues of tariff modelling, updating grid codes, drafting a standardized wheeling agreement, and due diligence for project licensing<sup>xxiv</sup>. Elements of TA were adapted later, such as introducing a regulatory information management system for ERA. TA focused on building competences of mid-level and junior staff at ERA, with insistence from the then CEO to ensure that institutional capacities are built in its core<sup>xxv</sup>.

During this process, the policy entrepreneurs (especially transnational actors KfW Advisory Staff and Consultant) had a deeper realization that the program was embedded within a larger actor-network and

electricity infrastructure which proved the process to be complex, requiring several adjustments<sup>xxvi</sup>. This meant networking and managing relations across a broad range of actors. ERA CEO played a significant role in helping the team maneuver around political and bureaucratic issues, especially repeated taxation issues and reforms that might have negatively affected the IPPs. He helped in bridging the communication between the policy team and ministries. KfW's good relations with PS MEMD also helped to provide a certain political push for the program when needed. There was no explicit form of resistance by the political leaders towards the program. Instead, as the interviewees expressed, there was a lackadaisical mindset as the program only comprised of small-scale projects. In other words, individual projects were not large enough to get government stakeholders and political leaders interested<sup>xxvii</sup>.

For program implementation, governance arrangements were developed mainly drawing on transnational influences and collective experiences of multilateral banks and donor programs. The GETFiT governance structure (see a graphical representation in Annex C) comprised of a steering committee (SC), investment committee (IC), and an implementation consultant. The idea of a steering committee as a governing body is common to multi-donor programs<sup>xxviii</sup>. The SC was designed to handle key decisions, particularly those which had larger political implications. An investment committee (IC) was set up as an independent body to review project proposals. As the KfW Consultant noted, "the idea of investment committee came from fund management in general...GETFiT concept borrowed ideas from the Geothermal Risk Mitigation Facility (GRMF) in Kenya...another program funded by KfW some years ago"<sup>xxix</sup>. For evaluation and selection of IPP projects, IC comprised of 6 industry experts, selected through a competitive process (Meyer et al., 2015). The idea of an implementation consultant was borrowed from "projects typically financed by development banks such as ADB, KfW... replacing the lacking implementation capacities in the country, hence outsourced to a consultancy"<sup>xxx</sup>.

The GETFiT Uganda Program was officially launched in May 2013 and the Government granted delegated authority to KfW for procurement, contracts, and implementation of the program (KfW and Multiconsult, 2018a). The GETFiT Secretariat was (and continues to be) based at ERA, Kampala for management of the program and supporting its implementation. The secretariat was deliberately embedded within the regulatory agency to encourage local ownership. ERA had an instrumental role to play "giving the programme legitimacy and clout in the energy sector" (KfW and Multiconsult, 2018b). ERA CEO was involved through the phases of inception, feasibility, design, and implementation<sup>xxxi</sup>.

Deviating and reformulating the policy goals, in 2014, solar PV was added as an additional technology to the program. However, discussions and contestations surrounding this started earlier. In 2010-11, solar PV was not a preferred technology in GETFiT as the government could not justify purchasing expensive electricity, which was likely to exceed the projected levelized cost of electricity (LCOE) of USDc

9/kWh<sup>xxxii</sup>. During 2012, in response to the private sector interest, ERA CEO wanted to pilot a small-scale solar IPP. VP DB supported this inclusion. However, the KfW Advisor was not in favor as 1-2 small PV projects alone would use up a majority of the donor funds due to a higher subsidy amount<sup>xxxiii</sup>. Nonetheless, in 2013, a meeting with the EU Ambassador to Uganda resolved this issue. The EU Ambassador, a proponent of renewables, through the EU-Africa Infrastructure Fund, provided additional grants to support the inclusion of PV. In addition, solar PV was also *politically appealing* due to its potential to come online quickly and alleviate supply shortages in the short-term, compared to hydro projects, which were already experiencing delays with signing PPAs. Around this time, renewable energy auctions (as an alternative to FiTs) were rapidly gaining traction worldwide. They were introduced for the solar component in GETFiT to experiment with a competitive bidding scheme, and more importantly, to benefit from the rapidly reducing solar PV prices which were anticipated to yield lower average tariffs (as the regulator does not fix the tariff rate unlike FiT). The top-up premium was USDc 5.37/kWh.

These insights reveal that the process did not entail transfer and implementation of a fully-formed off-the-shelf policy. Throughout, the different policy entrepreneurs employed strategies like building coalitions, agreement on common goals, shared belief on market-based interventions, gaining support and legitimacy within donor network, negotiating, appeasing and lobbying government actors, availing of sporadic opportunities, networking and managing stakeholder relations across a broad range of networks, and maintaining continuity through strong embeddedness within local institutions.

### **5.3. Which policy objects do the actors choose to transfer? Why?**

As mentioned previously, the objective was not just to implement policy instruments to meet the envisaged policy goals (in line with the renewable energy policy of Uganda) but to develop a wider set of incentive frameworks to encourage private investment, reduce investor risk and increase investor returns. The policy entrepreneurs together chose to transfer different policy instruments (such as FiT and RAs), elements of program design and governance, risk guarantee options (product offered by WB), and certain institutional arrangements (such as simplified regulatory procedures and information management systems). The GETFiT program provided targeted assistance for implementation, for developing standardized and simplified contract documentation (such request for proposals, PPAs, IAs, and DAs), and developed a system (via grants and concessional loans) for ensuring reliable grid integration and interconnection for small RE; all of them contributing to an enabling framework. Prior to GETFiT, there was a lack of interconnection policy, and a lack of clear guidelines and responsibilities to assure developers and investors. Further, several ideas for the governance and management structure of GETFiT were borrowed from multi-donor programs and through examples of other successful programs.

ERA played a lead role in initiating the collaboration with development agencies, but also strategically engaged with them for institution building and strengthening the capacities of the core team members in the Department of Economic Regulation, working closely on the issues of agreements and tariffs. Training and skill development workshops were conducted by the UNEP-Frankfurt School (led by the former VP DB) for the ERA mid-level and junior staff on tariff methodology, standardized agreements, and financial modelling. This is an important ‘object’ of transfer, which aims to ensure better implementation and sustainability of policy, leading to improved skills and knowledge at an institutional level. As Peck and Theodore (2010) put it, “mobile policies are not simply travelling across a landscape – they are remaking this landscape”.

As the previous section demonstrates, a number of beliefs and ideologies were implicit to the GETFiT program, reinforced through the development agencies (transnational actors), correspond with the overarching ideas such as liberal economic order, privatization, market-led development, transparency, and efficiency, which is prevalent within the larger discourse on climate policy and governance. Various empirical examples also demonstrate how global knowledge and narratives of successful programs and embodied expertise was made porous through transnational actors. However, there are limited instances of direct ‘transfer’ and more complex evolving process of interpretation and adaptation.

#### **5.4. From where do the actors draw their ideas, experience and lessons? Why are certain lessons drawn?**

FiTs have been implemented worldwide in a number of countries. However, the idea of a top-up payment over and above FiTs, supported by development finance, and other GETFiT toolbox elements were being implemented for the first time in SSA. Hence, “there were no direct experiences and lessons out there to draw from”<sup>xxxiv</sup>. In the first place, GETFiT Uganda draws heavily from the core concept of GETFiT designed by German stakeholders, from a European standpoint. The ideas for the GETFiT governance structure derived mainly from a range of other multi-country donor programs and wind and geothermal risk mitigation facilities, based also on the experience of KfW. Apart from the implicit lessons drawn from different countries globally, the experiences gathered from the German context, specific knowledge collated from the energy finance specialists (such as KfW, VP DB) and the country experts (such as ERA CEO) helped to shape the enabling environment and also strengthen the institutional arrangements.

In addition, Uganda was the second country to implement RE auctions in Africa, after South Africa (SA). SA was the first on the continent to implement RAs through the Renewable Energy International Power Producer Procurement Program (REIPPP). The success of FiT and Auctions (REIPPP) in SA (Meyer et al., 2015, Eberhard and Naude, 2017) influenced the adoption of GETFiT in Uganda, but to a limited extent.

As the KfW Advisor noted, “we looked at the REIPPP documents, the tender documents.... but it soon got clear to us that that approach will not work in Uganda”. The auctions program in SA were designed for large-scale projects, involving a number of lawyers and transaction advisors. Unlike SA, the market in Uganda was not as mature, and the auction program in this case was being designed for small-scale projects<sup>xxxv</sup>. Hence, the core actors had to design a competitive bidding program from scratch, and ERA was supportive and made sure that these opportunities were utilized to build capacities in the institution.

The varied educational backgrounds and prior experiences (internationally and nationally) of all the four policy entrepreneurs were important for the GETFiT development process. The actors drew on their relative expertise, resources and epistemic capacities, given their position and influence within a global network, to advocate for common preferences. The policy translation took place mainly through coalitions and partnerships. Hence, knowledge was acquired in this case largely through interpersonal interactions and exchanges within various organizational settings, across multiple scales, within the larger network of development banks and climate finance experts, in this case mostly German actors and venues of interface. The ideas and influences were from within the knowledge repository of development banks and aid agencies. The investment committee members were chosen by the core network members. And in that sense, the network may be exclusionary and accepting of predominantly those actors whose ideologies may agree, thereby creating actor constellations with shared beliefs.

### **5.5. What policy outcomes do the actors envisage? And do they achieve them through the GETFiT program?**

Under the Phase III GETFiT program, seventeen (17) projects secured financial closure, with a total installed capacity of nearly 160MW (KfW and Multiconsult, 2017). Of these, six (6) projects have been commissioned, which include three hydropower projects of a total installed capacity 18.1 MW, two grid-connected solar PV projects totalling 20MW, and a 20MW extension of the Kakira co-generation plant. Reportedly, the license and permit application forms have been simplified<sup>xxxvi</sup>, project monitoring and evaluation has been made more robust, and the capacity to undertake financial and tariff modelling functions by ERA staff has been enhanced (KfW and Multiconsult, 2017). Throughout 2014, several projects were delayed in the process of overcoming a number of legal and regulatory issues. Issues related to grid interconnection for several projects emerged as the most critical external risk to the program. However, most of them were overcome and a majority of the objectives envisaged were fulfilled. GETFiT Uganda standardized and simplified procedures, facilitated financial support to the projects, successfully selected projects which followed the strict evaluation criteria, and it also led to enhanced institutional capacities at a local level leading to positive outcomes.

In these ways, GETFiT led to positive policy implications. The RE sector managed to attract private sector developers and investors/banks under the GETFiT program, which it had previously failed to do. It is yet to be seen whether this momentum of private sector investment will continue in the near future, and whether the elements of this program sustain, and national actors evolve with the changing sectoral dynamics. For the policy entrepreneurs (especially the transnational actors), the process involved a steep learning curve. Further, the policy implications exemplify that not only did these policies and instruments lead to the intended outcomes of increasing private investments in the RE sector but they also delivered several co-benefits such as stronger institutions, streamlined and transparent governance, and reinforced capacities.

## **6. Discussion**

The literature on policy translation along with its key concepts highlights individual agency, referring to actors who move around, mobilize ideas and localities, and articulate certain preferences, narratives and ideologies. Similar parallels have been drawn by scholars of the sustainability transitions literature (and through a geography informed perspective) in line with understanding niche actors and how they move around and mobilize ideas (Sengers and Raven, 2015, Coenen et al., 2012). Within this literature, Sengers and Raven (2015) suggest an enquiry into how global flows of materials, people and knowledge across national borders interact with the local place-specific dynamics. In response, we pursued an enquiry of specific actors – ‘policy entrepreneurs’ – in the global south, in an under-researched SSA context, using the case of GETFiT in Uganda. This article modifies the heuristic DM framework, adopts a more agency sensitive and multi-scalar understanding, and reflects on it in light of transition studies. The agency is in overcoming the path dependency of large utility-scale power projects, enabling small-scale IPPs including renewables, and signifying local embeddedness.

This case concerns a low-income country context with heavy donor involvement, dependence on development finance, high perceived risks, political interference and bureaucracy in decision-making. GETFiT Uganda reveals the significance of a multi-actor and multi-disciplinary understanding of the different processes of change and how they interact. This article demonstrates how sustainability transitions in practice can be steered and navigated by small but strategically skilled and positioned actors, who are simultaneously mobile and anchored. It also points to the niche developments (first grid-connected solar PV projects commissioned) that resulted from a significant policy change. The strategies employed by actors, such as building coalitions, networking, appeasing, along with a pragmatic approach enabled the desirable shifts. The transnational actors (German agencies) heavily influenced the policy process, excelling in meaning-based and scale-based strategies, even while facing significant difficulties with maneuvering the context-based strategies. The program necessitated navigating a complex, messy and political terrain,



contextualizing the original GETFiT components, modifying the design elements, and articulating specific activities during the implementation process itself.

The transnational actors here act as agents of globalization, as knowledge repositories, and carriers of particular preferences and values (e.g. privatization). This highlights the importance of understanding how transnational actors enable the circulation of ideas and ideologies between places, which has received limited attention in transition studies (Truffer et al., 2015, Hansen et al., 2017). Further, as the narrative illustrates, the complementary roles played by the transnational and national actors was decisive in shaping the outcome. The novelty was in the actor coalition, and the influential roles played by both national and transnational actors in leveraging their capacities and respective positions. This necessitates a better understanding of the processes of ‘co-creation’. The ERA CEO proactively sought solutions to policy problems, engaged with a network of experts, mobilized political support, built capacities, and steered the program to attain policy goals. ERA gave the policy a territorial fixity and embeddedness, with crossovers into global flows and relations.

## **7. Conclusions and policy implications**

This article is a response to the research question: *How did the actor constellations translate RE policy (case of GETFiT) and accelerate transitions within the specific political and institutional context of Uganda?* It provides a detailed account of how global renewable energy policies were translated through the case of GETFiT Uganda. Our aim was to focus on the policy making processes, driven by micro-politics and actor-strategies, to demonstrate how these insights can inform a better understanding of sustainability transitions more broadly, and how these can be accelerated through policy translation. In the context of a low-income country, our research reveals the significance of transnational networks, experience sharing, local embeddedness and the mechanisms of ‘co-creation’ as central to the process of policy translation. No single actor can be attributed to determining the exact transition pathway, rather it was the interplay of global and local actors that steered and shaped the policy transfer process, in pursuit of a common and agreed agenda to provide economic support to renewable energy projects.

In terms of policy implications, we share three key considerations. Firstly, the importance of operating within a macro-economic framework that is aligned with the logics of donor-funded policy advocacy. In this case, it was a reformed power sector operating with a transparent and credible regulatory body, combined with buy-in from political actors and development agencies, which privileged foreign private investment, for which various multilateral donor agencies were willing to offer risk mitigation and investment guarantees. Secondly, the importance of clear and country-led goals and targets, e.g. to double the share of renewables in the energy mix by 2030, and to pursue an overarching vision of universal

electrification by 2040 (REA, 2013). Thirdly, the importance of trial and error combined with the continuity of key individuals driving forward the policy translation process, both locally and globally, who are willing to embrace learning by doing, and collaborate in an open manner in pursuit of common goals.

## ANNEX I: Interviews Conducted

Interviewee Number	Role	Affiliation	Interview Type
1.	GETFiT Coordinator	GETFiT Secretariat, Uganda	Personal
2.	Senior Energy Program Manager	KfW, Uganda	Personal
3.	Former CEO	Electricity Regulatory Authority (ERA), Uganda	Personal
4.	Projects Engineer	ERA, Uganda	Personal
5.	Manager-Pricing	ERA, Uganda	Personal
6.	First Executive Director	ERA, Uganda	Personal
7.	Energy and Climate Advisor	DFID, Uganda	Personal
8.	Former Energy Sector Development Advisor	KfW, Uganda	Skype
9.	Operations Manager	Soroti Solar Plant, Uganda	Personal
10.	Former GETFiT Consultant	KfW, Uganda	Skype
11.	Project Director	The Madhvani Group, Uganda	Phone
12.	Former Vice-President	Deutsche Bank, Germany	Skype
13.	Senior Consultant	Multiconsult-Norway	Personal
14.	Former Energy Sector Advisor	Ministry of Energy and Mineral Development, Uganda	Personal

## ANNEX II: Interview Guide

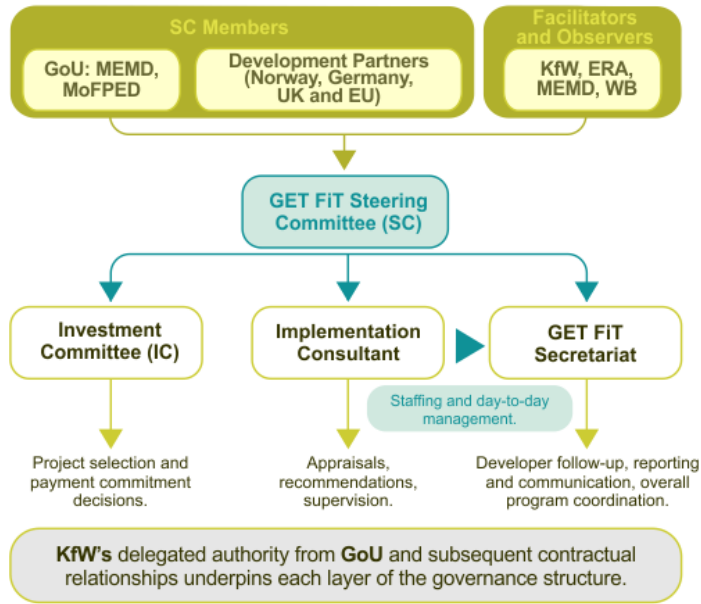
### Guiding Questions regarding Feed-in Tariffs and Institutional Context

1. History of the electricity sector, reforms, and what was the need for feed-in tariffs (FiT)?
2. What was the impact of power sector reforms on private investments in the early 2000s? How many projects were licensed? Challenges?
3. Details on the history of FiT (when, how was this instrument chosen, why was this choice made, what other options were considered, any consultant hired for advice)?
4. Which countries were sought as examples, or from which countries did the FiT Uganda draw elements?
5. Key stakeholders involved in designing the FiT policy, who took the initiative (within and outside of ERA), how and why?
6. How was FiT policy received by the Ministry of Energy and other government officials? And by the private investors? Was there any resistance or disagreement?
7. Performance and effectiveness of FiT Phase I? Learnings? Issues? Concerns?
8. What was the need for Phase II? What were the main differences between Phase I and II?
9. How specifically did the external consultant support in designing the FiT-II?
10. Lobbying, negotiations, stakeholder engagement with regard to feed-in tariff rates, priority technologies, specific design elements etc.?
11. Impact of FiT-II? Did many developers express interest, send proposals? Were any projects licensed? Why not?
12. What were the reasons why private sector investments remained low throughout? What were their concerns? Or expectations?
13. What after Phase II? Where did the idea of GETFiT come from?

### Guiding Questions regarding GETFiT and the process

1. How and why did you get involved in GETFiT? What was your motivation?
2. What was it about the GETFiT concept that made it relevant? How was it conceived? How was the model adapted to the context of Uganda?
3. What were your roles and responsibilities? Who were the other actors in shaping the program? What were their roles and responsibilities?
4. Did you seek to involve any external consultants or advisors for the program? Why or why not?
5. Which elements of the FiT/RA were transferred and which were left out/changed?
6. How specifically did the original model of GETFiT contribute to GETFiT Uganda, and how did it deviate? Why?
7. How did the GETFiT structure develop? Which ideas were influential for designing the governance structure?
8. What were the key challenges and points of disagreement?
9. Why wasn't solar included in the GETFiT program initially and why was it added later?
10. Why was FiT premium not applied in case of solar? Why auctions?
11. How was the auction designed? Who was involved? Which ideas were influential?
12. How was the GETFiT structured? How was donor support sought? Why and how were the specific committees formed? Which ideas influenced the process?
13. What were the changes/adaptations made from the idea/vision stage to the implementation stage? Challenges through the GETFiT process?

### ANNEX III: GETFiT Governance Structure and Toolbox



Source: <https://www.getfit-uganda.org/>

## References

- ALVAREZ, D. F. M., KITZING, L., SOYSAL, E. R., STEINHILBER, S., DEL RÍO, P., WIGAND, F., KLESSMANN, C., TIEDEMANN, S., BLANCO, A. L. A. & WELISCH, M. 2017. Auctions for renewable energy support- Taming the beast of competitive bidding.
- ATKINSON, R. & FLINT, J. 2001. Accessing hidden and hard-to-reach populations: Snowball research strategies. *Social research update*, 33, 1-4.
- BANK, D. 2011. GET-FIT Plus: De-Risking Clean Energy Business Models in a Developing Country Context. *DB Climate Change Advisors*.
- BAUMGARTNER, F. R. & JONES, B. D. 2010. *Agendas and instability in American politics*, University of Chicago Press.
- BENNETT, C. J. 1991. What is policy convergence and what causes it? *British journal of political science*, 21, 215-233.
- BENSON, D. & JORDAN, A. 2011. What have we learned from policy transfer research? Dolowitz and Marsh revisited. *Political studies review*, 9, 366-378.
- BETSILL, M. M. & BULKELEY, H. 2004. Transnational networks and global environmental governance: The cities for climate protection program. *International studies quarterly*, 48, 471-493.
- BRAUN, V. & CLARKE, V. 2006. Using thematic analysis in psychology. *Qualitative research in psychology*, 3, 77-101.
- BROUWER, S. & BIERMANN, F. 2011. Towards adaptive management: examining the strategies of policy entrepreneurs in Dutch water management. *Ecology and Society*, 16.
- CLÉMENÇON, R. 2016. The two sides of the Paris climate agreement: Dismal failure or historic breakthrough? : SAGE Publications Sage CA: Los Angeles, CA.
- COENEN, L., BENNEWORTH, P. & TRUFFER, B. 2012. Toward a spatial perspective on sustainability transitions. *Research policy*, 41, 968-979.
- COMMON, R. 2004. Organisational learning in a political environment: Improving policy-making in UK government. *Policy studies*, 25, 35-49.
- CURREN, J., MANYEWE, O. & KAREKAHO, T. 2010. Study to Establish the Cost Structure and Applicable Feed-In Tariffs for Alternative Energy Generation Technologies for Uganda: Final Report.
- DBCCA 2010. GETFIT Program - Global Energy Transfer Feed-in Tariffs for Developing Countries. Frankfurt, Germany: Deutsche Bank Climate Change Advisors.
- DE CONINCK, H., HAAKE, F. & VAN DER LINDEN, N. 2007. Technology transfer in the clean development mechanism. *Climate policy*, 7, 444-456.
- DE JONG, M. 2013. China's art of institutional bricolage: Selectiveness and gradualism in the policy transfer style of a nation. *Policy and Society*, 32, 89-101.
- DESGAIN, D. & HASELIP, J. 2015. Barriers to the transfer of low-carbon electricity generation technologies in four Latin American countries. *Energy Sources, Part B: Economics, Planning, and Policy*, 10, 348-360.
- DHARWADKAR, B., GEORGE, G. & BRANDES, P. 2000. Privatization in emerging economies: An agency theory perspective. *Academy of management review*, 25, 650-669.
- DIMITROV, R. S. 2016. The Paris agreement on climate change: Behind closed doors. *Global Environmental Politics*, 16, 1-11.
- DOLOWITZ, D. P. & MARSH, D. 2000. Learning from abroad: The role of policy transfer in contemporary policy-making. *Governance*, 13, 5-23.
- EBERHARD, A. 2013. Feed-in tariffs or auctions? Procuring renewable energy supply in South Africa. *Viewpoint. Public Policy for the Private Sector. Note*.
- EBERHARD, A., GRATWICK, K., MORELLA, E. & ANTMANN, P. 2016. *Independent power projects in Sub-Saharan Africa: Lessons from five key countries*, The World Bank.

- EBERHARD, A. & KÅBERGER, T. 2016. Renewable energy auctions in South Africa outshine feed-in tariffs. *Energy Science & Engineering*, 4, 190-193.
- EBERHARD, A. & NAUDE, R. 2017. Recommendations for the Design Of Successful Renewable Energy Auctions or Competitive Tenders in Africa: Lessons from South Africa. Graduate School of Business: University of Cape Town
- EDMONDSON, D. L., KERN, F. & ROGGE, K. S. 2018. The co-evolution of policy mixes and socio-technical systems: Towards a conceptual framework of policy mix feedback in sustainability transitions. *Research Policy*.
- EISENHARDT, K. M. 1989. Agency theory: An assessment and review. *Academy of management review*, 14, 57-74.
- EISENHARDT, K. M. & GRAEBNER, M. E. 2007. Theory building from cases: Opportunities and challenges. *The Academy of Management Journal*, 50, 25-32.
- EMACONSULT LTD 2006. Environmental Audit - For the Aggreko Thermal Power Plant (Final Draft Report)
- EVANS, M. 2009. Policy transfer in critical perspective. *Policy studies*, 30, 243-268.
- EVANS, M. & DAVIES, J. 1999. Understanding Policy Transfer: A Multi-Level, Multi-Disciplinary Perspective *Public Administration*, 77, 361-385.
- GEELS, F. W. 2010. Ontologies, socio-technical transitions (to sustainability), and the multi-level perspective. *Research policy*, 39, 495-510.
- GIOIA, D. A., CORLEY, K. G. & HAMILTON, A. L. 2013. Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational research methods*, 16, 15-31.
- GOSENS, J. & LU, Y. 2014. Prospects for global market expansion of China's wind turbine manufacturing industry. *Energy Policy*, 67, 301-318.
- HAAS, P. M. 1992. Introduction: epistemic communities and international policy coordination. *International organization*, 46, 1-35.
- HAGGARD, S. & KAUFMAN, R. R. 2018. *The politics of economic adjustment: international constraints, distributive conflicts and the state*, Princeton University Press.
- HANSEN, U. E., NYGAARD, I., ROMIJN, H., WIECZOREK, A., KAMP, L. M. & KLERKX, L. 2017. Sustainability transitions in developing countries: Stocktaking, new contributions and a research agenda. Elsevier.
- HASELIP, J. & HILSON, G. 2005. Winners and losers from industry reforms in the developing world: experiences from the electricity and mining sectors. *Resources Policy*, 30, 87-100.
- HASELIP, J. & POTTER, C. 2010. Post-neoliberal electricity market 're-reforms' in Argentina: Diverging from market prescriptions? *Energy policy*, 38, 1168-1176.
- HASELIP, J. A. 2011. FIT for use everywhere? Assessing experiences with renewable energy feed-in tariffs. *Diffusion of renewable energy technologies: Case studies of enabling frameworks in developing countries*. UNEP Risø Centre on Energy, Climate and Sustainable Development. Department of Management Engineering. Technical University of Denmark (DTU).
- HESS, D. J. 2014. Sustainability transitions: A political coalition perspective. *Research Policy*, 43, 278-283.
- HUENTELER, J. 2014. International support for feed-in tariffs in developing countries—a review and analysis of proposed mechanisms. *Renewable and Sustainable Energy Reviews*, 39, 857-873.
- HUITEMA, D. & MEIJERINK, S. 2010. Realizing water transitions: the role of policy entrepreneurs in water policy change. *Ecology and Society*, 15.
- IRENA 2013. Renewable Energy Auctions in Developing Countries
- IRENA 2018. Renewable Energy Auctions: Cases from Sub-Saharan Africa
- JACOBS, D. 2016. *Renewable energy policy convergence in the EU: the evolution of feed-in tariffs in Germany, Spain and France*, Routledge.
- JONES, R., PYKETT, J. & WHITEHEAD, M. 2014. The geographies of policy translation: how nudge became the default policy option. *Environment and Planning C: Government and Policy*, 32, 54-69.

- KALKUHL, M., KNOPF, B., VAN DENDER, K., VAN ASSELT, H., KLENERT, D., LUBOWSKI, R., SCHMIDT, T. & STEFFEN, B. 2018. Bridging the gap: Fiscal reforms for the low-carbon transition. *Emissions Gap Report 2018*. United Nations Environment Programme (UNEP).
- KERN, F. & ROGGE, K. S. 2018. Harnessing theories of the policy process for analysing the politics of sustainability transitions: A critical survey. *Environmental innovation and societal transitions*, 27, 102-117.
- KFW & MULTICONSULT 2014. GET FIT Uganda Annual Report 2014.
- KFW & MULTICONSULT 2017. GET FIT Uganda Annual Report 2017.
- KFW & MULTICONSULT 2018a. Making The Impact Stick: How Targeted Technical Assistance Can Help To Create A Sustainable PPP Programme. *Lessons Learned from Implementation of a Successful PPP Programme*. Uganda.
- KFW & MULTICONSULT 2018b. Programme Implementation: How do you make it work? . *Lessons Learned from Implementation of a Successful PPP Programme*. Uganda
- KINGDON, J. W. & THURBER, J. A. 1984. *Agendas, alternatives, and public policies*, Little, Brown Boston.
- KIVIMAA, P. & KERN, F. 2016. Creative destruction or mere niche support? Innovation policy mixes for sustainability transitions. *Research Policy*, 45, 205-217.
- KIVIMAA, P. & VIRKAMÄKI, V. 2014. Policy mixes, policy interplay and low carbon transitions: the case of passenger transport in Finland. *Environmental Policy and Governance*, 24, 28-41.
- KLAG, M. & LANGLEY, A. 2013. Approaching the conceptual leap in qualitative research. *International Journal of Management Reviews*, 15, 149-166.
- KNILL, C. 2005. Introduction: Cross-national policy convergence: concepts, approaches and explanatory factors. *Journal of European public policy*, 12, 764-774.
- LANGLEY, A. & ABDALLAH, C. 2011. Templates and turns in qualitative studies of strategy and management. *Building methodological bridges*. Emerald Group Publishing Limited.
- MARKARD, J., RAVEN, R. & TRUFFER, B. 2012. Sustainability transitions: An emerging field of research and its prospects. *Research policy*, 41, 955-967.
- MARKARD, J., SUTER, M. & INGOLD, K. 2016. Socio-technical transitions and policy change—Advocacy coalitions in Swiss energy policy. *Environmental Innovation and Societal Transitions*, 18, 215-237.
- MATHEWS, J. A. 2002. Competitive advantages of the latecomer firm: A resource-based account of industrial catch-up strategies. *Asia Pacific journal of management*, 19, 467-488.
- MCCANN, E. & WARD, K. 2012. Policy assemblages, mobilities and mutations: Toward a multidisciplinary conversation. *Political studies review*, 10, 325-332.
- MCCANN, E. & WARD, K. 2013. A multi-disciplinary approach to policy transfer research: geographies, assemblages, mobilities and mutations. *Policy Studies*, 34, 2-18.
- MEIJERINK, S. & HUITEMA, D. 2010. Policy Entrepreneurs and Change Strategies: Lessons from Sixteen Case Studies of Water Transitions around the Globe-[www-publicatie](http://www-publicatie).
- MEMD 2014. 2014 Statistical Abstract In: DEVELOPMENT, M. O. E. A. M. (ed.). Uganda.
- MENDONÇA, M. 2009. *Feed-in tariffs: accelerating the deployment of renewable energy*, Routledge.
- MEYER-RENSCHHAUSEN, M. 2013. Evaluation of feed-in tariff-schemes in African countries. *Journal of Energy in Southern Africa*, 24, 00-00.
- MEYER, R., EBERHARD, A. & GRATWICK, K. 2018. Uganda's power sector reform: There and back again? *Energy for Sustainable Development*, 43, 75-89.
- MEYER, R., TENENBAUM, B. W. & HOSIER, R. H. 2015. Promoting solar energy through auctions: the case of Uganda. In: GROUP, W. B. (ed.) *Live wire knowledge note series*. Washington D.C.
- MINTROM, M. 2000. *Policy entrepreneurs and school choice*, Georgetown University Press.
- MINTROM, M. & NORMAN, P. 2009. Policy entrepreneurship and policy change. *Policy Studies Journal*, 37, 649-667.



- MUKHTAROV, F. 2014. Rethinking the travel of ideas: policy translation in the water sector. *Policy & Politics*, 42, 71-88.
- MUKHTAROV, F., BROCK, A., JANSSEN, S. & GUIGNIER, A. 2013. Actors and strategies in translating global conservation narratives to Vietnam: An agency perspective. *Policy and Society*, 32, 113-124.
- MURPHY, K., KIRKMAN, G. A., SERES, S. & HAITES, E. 2015. Technology transfer in the CDM: an updated analysis. *Climate Policy*, 15, 127-145.
- NGANGA, J., WOHLERT, M., WOODS, M., BECKER-BIRCK, C., JACKSON, S. & RICKERSON, W. 2013. Powering Africa through Feed-in Tariffs: Advancing renewable energy to meet the continent's electricity needs.
- NORMANN, H. E. 2017. Policy networks in energy transitions: The cases of carbon capture and storage and offshore wind in Norway. *Technological Forecasting and Social Change*, 118, 80-93.
- OBERTHÜR, S. & TÄNZLER, D. 2007. 11. Climate policy in the EU: international regimes and policy diffusion. *Europe and Global Climate Change: Politics, Foreign Policy and Regional Cooperation*, 255.
- OCKWELL, D. G. & MALLETT, A. 2012. *Low-carbon technology transfer: from rhetoric to reality*, Routledge.
- PATERSON, M., HOFFMANN, M., BETSILL, M. & BERNSTEIN, S. 2014. The micro foundations of policy diffusion toward complex global governance: An analysis of the transnational carbon emission trading network. *Comparative Political Studies*, 47, 420-449.
- PAULY, L. 2018. Enforcing the rules in a global economy: the emergence of structural conditionality in the World Bank and the International Monetary Fund. *Critical Issues in International Financial Reform*. Routledge.
- PECK, J. & THEODORE, N. 2010. Mobilizing policy: Models, methods, and mutations. *Geoforum*, 41, 169-174.
- PLAS, R. J. V. D. & KYEZIRA, A. 2009. GTZ Target Market Analysis: Uganda's Small-Hydro Energy Market
- POPP, D. 2011. International technology transfer, climate change, and the clean development mechanism. *Review of Environmental Economics and Policy*, 5, 131-152.
- RADOSEVIC, S. 1999. *International technology transfer and catch-up in economic development*, Edward Elgar Publishing.
- RAMOS-MEJÍA, M., FRANCO-GARCIA, M.-L. & JAUREGUI-BECKER, J. M. 2018. Sustainability transitions in the developing world: Challenges of socio-technical transformations unfolding in contexts of poverty. *Environmental science & policy*, 84, 217-223.
- RAVEN, R., SCHOT, J. & BERKHOUT, F. 2012. Space and scale in socio-technical transitions. *Environmental Innovation and Societal Transitions*, 4, 63-78.
- REA 2013. Rural Electrification Strategy and Plan 2013-2022. In: MEMD (ed.). Uganda.
- REICHARDT, K., NEGRO, S. O., ROGGE, K. S. & HEKKERT, M. P. 2016. Analyzing interdependencies between policy mixes and technological innovation systems: the case of offshore wind in Germany. *Technological Forecasting and Social Change*, 106, 11-21.
- RICKERSON, W., HANLEY, C., LAURENT, C. & GREACEN, C. 2013. Implementing a global fund for feed-in tariffs in developing countries: A case study of Tanzania. *Renewable Energy*, 49, 29-32.
- ROGGE, K. S., KERN, F. & HOWLETT, M. 2017. Conceptual and empirical advances in analysing policy mixes for energy transitions. *Energy Research & Social Science*, 33, 1-10.
- ROGGE, K. S. & REICHARDT, K. 2016. Policy mixes for sustainability transitions: An extended concept and framework for analysis. *Research Policy*, 45, 1620-1635.
- ROSE, R. 1993. *Lesson-drawing in public policy: A guide to learning across time and space*, Chatham House Publishers Chatham.
- ROSE, R. 2005. *Learning from Comparative Public Policy: A Guide to Lesson-drawing*, Routledge.

- ROTMANS, J. & LOORBACH, D. 2009. Complexity and transition management. *Journal of Industrial Ecology*, 13, 184-196.
- SAHOO, S. K. 2016. Renewable and sustainable energy reviews solar photovoltaic energy progress in India: A review. *Renewable and Sustainable Energy Reviews*, 59, 927-939.
- SCHNEIDER, M., HOLZER, A. & HOFFMANN, V. H. 2008. Understanding the CDM's contribution to technology transfer. *Energy policy*, 36, 2930-2938.
- SENGERS, F. & RAVEN, R. 2015. Toward a spatial perspective on niche development: The case of Bus Rapid Transit. *Environmental Innovation and Societal Transitions*, 17, 166-182.
- SHIN, J.-S. 2013. *The Economics of the Latecomers: Catching-up, technology transfer and institutions in Germany, Japan and South Korea*, Routledge.
- SIMMONS, B. A. & ELKINS, Z. 2004. The globalization of liberalization: Policy diffusion in the international political economy. *American political science review*, 98, 171-189.
- STONE, D. 2001. Learning lessons, policy transfer and the international diffusion of policy ideas. *Centre for the Study of Globalisation and Regionalisation working paper*.
- STONE, D. 2004. Transfer agents and global networks in the 'transnationalization' of policy. *Journal of European public policy*, 11, 545-566.
- STONE, D. 2008. Global public policy, transnational policy communities, and their networks. *Policy studies journal*, 36, 19-38.
- STONE, D. 2012. Transfer and translation of policy. *Policy studies*, 33, 483-499.
- STONE, D. 2017. Understanding the transfer of policy failure: bricolage, experimentalism and translation. *Policy & Politics*, 45, 55-70.
- STRIPPLE, J. & PATTERBERG, P. 2010. Agency in global climate governance: setting the stage. *Global Climate Governance Post 2012: Architectures, Agency and Adaptation*.
- TEMENOS, C. & MCCANN, E. 2013. Geographies of policy mobilities. *Geography Compass*, 7, 344-357.
- TRUFFER, B., MURPHY, J. T. & RAVEN, R. 2015. The geography of sustainability transitions: Contours of an emerging theme. Elsevier.
- VERBONG, G. P. & GEELS, F. W. 2010. Exploring sustainability transitions in the electricity sector with socio-technical pathways. *Technological Forecasting and Social Change*, 77, 1214-1221.
- WEI, L. 1995. International technology transfer and development of technological capabilities: a theoretical framework. *Technology in society*, 17, 103-120.
- WINKLER, J., MAGOSCH, M. & RAGWITZ, M. 2018. Effectiveness and efficiency of auctions for supporting renewable electricity—What can we learn from recent experiences? *Renewable energy*, 119, 473-489.
- YIN, R. K. 2009. Case study research: Design and methods (applied social research methods). *London and Singapore: Sage*.
- YIN, R. K. 2011. *Applications of case study research*, sage.
- YIN, R. K. 2013. Validity and generalization in future case study evaluations. *Evaluation*, 19, 321-332.
- ZHANG, S. & HE, Y. 2013. Analysis on the development and policy of solar PV power in China. *Renewable and Sustainable Energy Reviews*, 21, 393-401.

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- i Personal interview # 3
  - ii Personal interview # 4
  - iii Personal interview # 3, # 4
  - iv Personal interview # 3, # 4
  - v Personal interview # 3, # 4, # 6
  - vi Personal interview # 3
  - vii Personal interview # 3
  - viii Personal interview # 3
  - ix Personal interview # 3, # 14
  - x Personal interview # 3
  - xi Personal interview # 12
  - xii Personal interview # 8, # 3, # 12
  - xiii Personal interview # 8
  - xiv Personal interview # 8
  - xv Personal interview # 8
  - xvi Personal interview # 11
  - xvii Personal interview # 8
  - xviii Personal interview #8, # 10
  - xix Personal interview # 8
  - xx Personal interview # 8, # 10
  - xxi Personal interview # 8, # 10
  - xxii Personal interview # 10
  - xxiii Personal interview # 7
  - xxiv Personal interview # 5
  - xxv Personal interview # 2, # 10, # 8
  - xxvi Personal interview # 10
  - xxvii Personal interview # 8, # 10, # 3
  - xxviii Personal interview #8, # 10
  - xxix Personal interview # 10
  - xxx Personal interview # 10
  - xxxi Personal interview # 3, # 8, # 12
  - xxxii Personal interview # 3, # 4
  - xxxiii Personal interview # 8, # 10, # 12
  - xxxiv Personal interview # 8
  - xxxv Personal interview # 8
  - xxxvi Personal interview # 5