

POLITICAL ECONOMY ANALYSIS OF THE BINDING CONSTRAINTS TO RENEWABLE ENERGY INVESTMENT IN GHANA

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OUTLINE

- ❖ **Background to PEA on Binding Constraints to RE development in Ghana**
- ❖ **Approaches to the PEA Study**
- ❖ **Binding constraints to RE investment in Ghana via PEA**
- ❖ **Interventions for change**
- ❖ **Conclusions**

BACKGROUND TO PEA ON BINDING CONSTRAINTS TO RE DEVELOPMENT IN GHANA

What constraints RE investment in Ghana?

- ❖ Long list of constraints and related policies
- ❖ But not all constraints are equally important.

QUESTIONS

- ❖ What are the binding constraints to investment in RE in Ghana?
- ❖ Which policies can remove the most binding constraints and are they politically feasible?
- ❖ What will be the macroeconomic effect of increasing the share of RE and implementing the required policies in Ghana?

Background ...

From Growth Diagnostics Framework to Growth Investment Diagnostics Framework

- ❖ “For this particular country, at this particular time, what is preventing the country from achieving higher sustained and shared growth?” (Hausmann, Klinger and Wagner, 2008: 4).
 - ❖ ‘there may be many reasons why an economy does not grow, but each reason generates a distinctive set of symptoms’ (*ibid.*: 4).
- ❖ GIDF:.. for this country, at this particular time, what is preventing higher levels of investment in a specific RE technology for which there is an economic rationale?

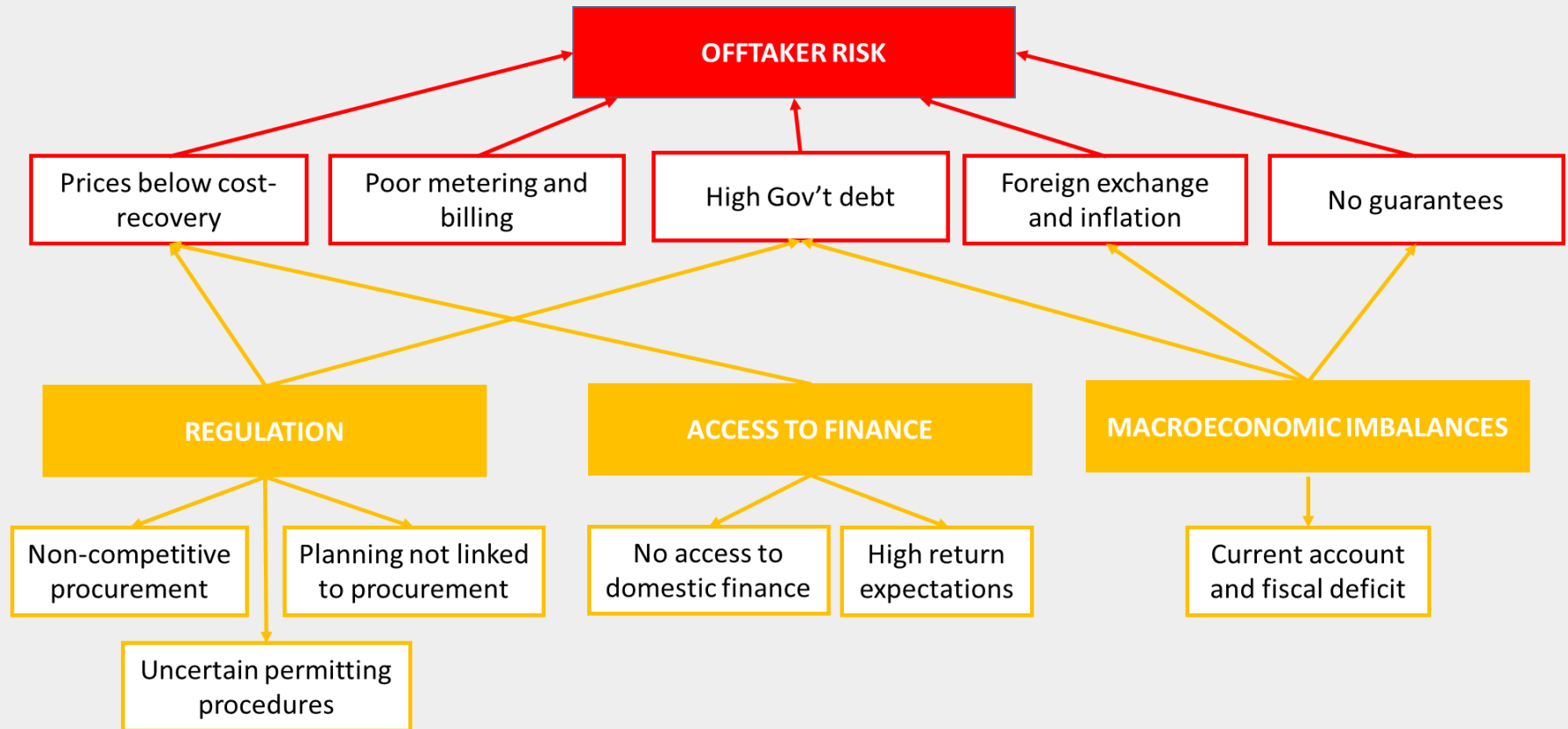
Background ...

GREEN INVESTMENT DIAGNOSTICS METHODOLOGY



BINDING CONSTRAINTS TO RE INVESTMENT IN GHANA VIA PEA

Fig 1: Identified Binding Constraints to RE investment in Ghana



Source: Pueyo et al. (2016)

APPROACH TO THE PEA STUDY

- ❖ ...a political economy analysis creates the avenue to get beneath the formal structures in a bid to unearth the underlying interests, incentives and institutions that foster or frustrate change (Newell *et al.*, 2014)
- ❖ ... optimal solutions may be unachievable but workable ways forward may nonetheless be found by identifying the sources of support for reform and using them as entry points that can unleash an ongoing, virtuous circle of cumulative change (Levy 2014).

APPROACH TO THE PEA STUDY

❖ Hybridisation of Schmitz (2012) and Barnett *et al.*, (2016) approaches.

1. Problem identification	E.g. poor performance in the power sector
2. Diagnosis	What features of the political economy generate and contribute to the persistence of the problem?
3. Prognosis	Given the diagnosis, what is the potential for change, and what are the mostly likely pathways of change?
4. Interventions or coalitions	How can particular actors help to shift the pattern of incentives in a manner that promotes desirable change?

Potential Policies Mapping: Policies To Address Constraints and Expected Outcomes

Constraint	Policy	Expected Outcome
Off-Taker Risk	Privatisation of the revenue arm of the power sector.	<ul style="list-style-type: none"> ➤ Achieving an efficient and effective revenue collection system. ➤ Encouraging private sector participation through the provision of a reliable repayment mechanism to power producers.
	Improved management of ECG including revenue collection (especially revenue from debtors - government and others)	<ul style="list-style-type: none"> ➤ Alternative to privatisation but entails adopting effective management practices, which improves overall performance of the off-taker.
	Promotion of efficient technical practices within the distribution arm of the power sector through privatisation.	<ul style="list-style-type: none"> ➤ Reduction in distribution losses, particularly non-technical losses.
	Establishment of a competitive off-taker market in the power sector.	<ul style="list-style-type: none"> ➤ Encouraging other mandated institutions such as mining companies, bulk power producers and VRA to sign off-taker agreements in other to promote competition.

Potential Policies Mapping...

Constraint	Policy	Expected Outcome
Faulty power sector regulation	Establish a full-time high level IPP facilitator in the power sector.	<ul style="list-style-type: none"> ➤ Promotion of competitive solicitation and contracting process that is based on standardised terms, including payment risk mitigation. ➤ Encouraging transparent auctioning systems instead of a system based on unsolicited proposals with projects that may forever stay in the pipeline.
	Establishment of a reliable and transparent full-cost tariff pricing system	<ul style="list-style-type: none"> ➤ Ensuring that the automatic price adjustment formula takes into consideration several indicators such as the environmental cost in order to be cost reflective.
	Full Implementation of the RE-Act (Act 832) and its enshrined subsidiary instruments (Net-metering, mini-grid systems, and the RE fund and levies)	<ul style="list-style-type: none"> ➤ To guide and track progress of RE development in the power sector
Lack of access to appropriate finance	Establishment of RE financial instruments within domestic banks by Government with lower interest rates	<ul style="list-style-type: none"> ➤ Opportunity to offer lower interest charges on loans and to offer long term finance to investors

OFF-TAKER RISK CONSTRAINT

- ❖ The present off-taker is unable to maintain a credible financial balance sheet as a result of bottlenecks, making RE investment risky
- ❖ Potential policies to address this constraint:
 1. Privatisation of the revenue arm of the power sector. Implementation limited due to:
 - ❖ Fear of high tariff
 - ❖ Ideological perspectives of ECG as a national identity
 - ❖ Foreign/external driven agenda
 - ❖ Job uncertainty
 - ❖ Lack of broader consultation

“An important constraint is that the off-taker is not financially credible. They are unable to pay their bills” (Stakeholder A)).

“In Ghana, we used to be vertically integrated and then we went through reform, broke it up into generation, transmission and distribution. Currently, distribution does two things. We do distribution and we do supply. Typically, you may want to separate the two functions and then for example open the supply phase up for competition” (Stakeholder B)

- ❖ **Fear of high tariff**
- ❖ **Ideological perspectives of ECG as a national identity**
- ❖ **Foreign/external driven agenda**

“Ownership should be Ghanaian. It should be listed on the Ghana Stock Exchange so that every Ghanaian will be a shareholder. In that way, it will still be for Ghanaians but it will mean government cannot take out anything from the ECG.”(I).

....Unfortunately, the government of Ghana with tacit pressure from MCC of the United States of America, is still pushing this agenda despite all the negative implications for our country and its citizens.”(H).

“The fact is you are bringing a third party, which we see will be more efficient and more effective. The fact too, however, is that we also have information about the cost of electricity being higher than how much we are paying and it means that a third party who is coming in with a business motive or private motive will need to break even or make profit for that matter through high cost of electricity tariffs. So, consumers would then try to fight against those things” (Stakeholder E).

“The other argument is also that tariffs will go up with privatisation. This doesn't happen anywhere. Even in the advanced countries, tariffs are not fixed by the operator. That is why we have PURC, they are independent and take certain thing into consideration before bringing the tariff. So the argument that certain prices will go up because a concessionaire is coming in is not so” (Stakeholder G).

“So ECG will still be there but it will be a whole new company who owns the assets within the concession period. They grant them the access and enter into an agreement on how they are supposed to operate” (G)

“Some people ask this question. They think, how will Americans put in this money if they have no interest? They think it's a way of the Americans taking hold of our power sector” (G).

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❖ **Job uncertainty**

❖ **Lack of broader consultation**

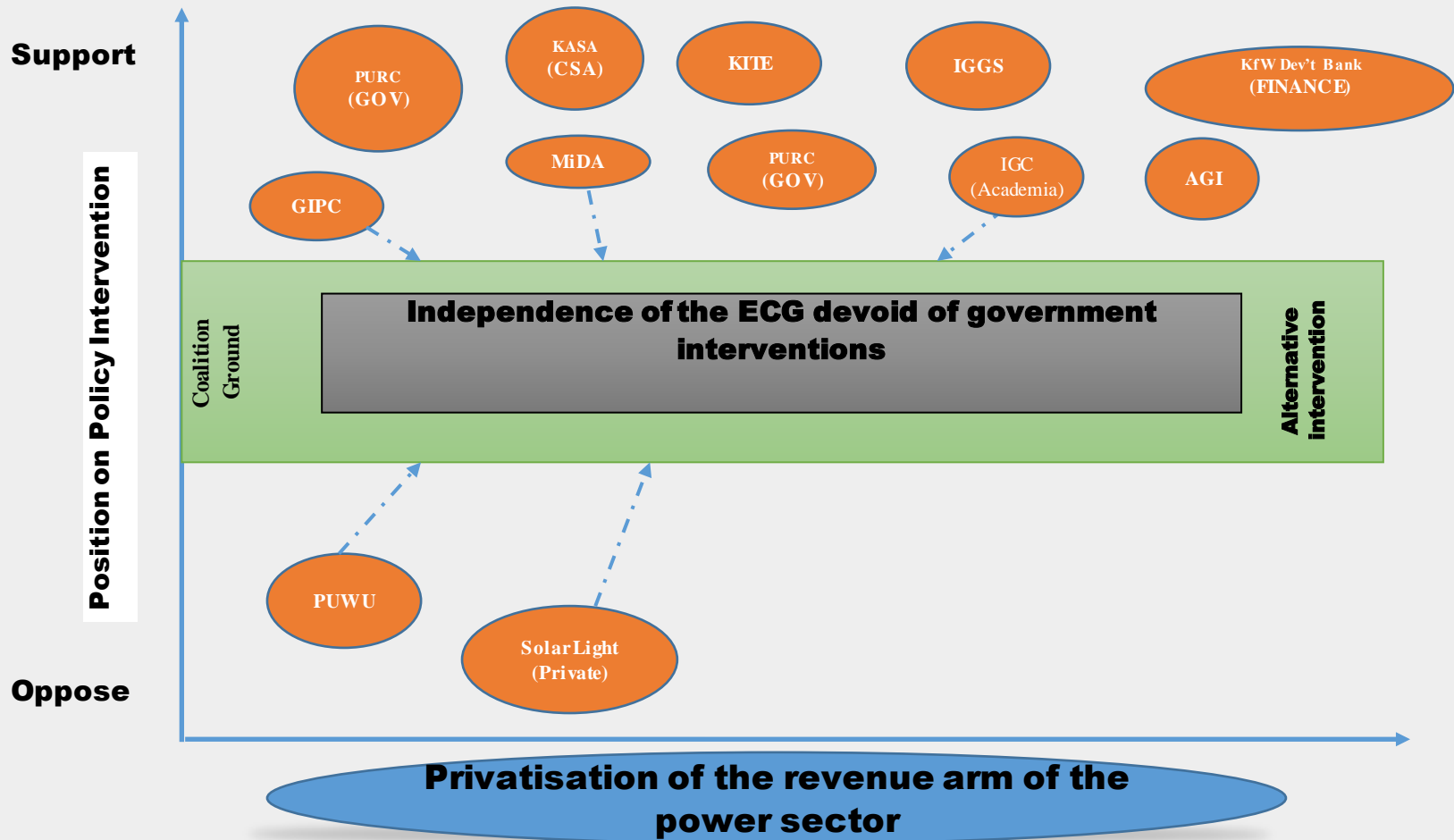
"...why really government chose concession nobody knows... that hasn't been made public to us either. It was solely based on the conclusions of IFC or government has further details that we don't know. If you ask government you are told they are working with ECG management. Who are the ECG management? The ECG management is government, so if government appoints the key persons in ECG and they are part of the negotiation to privatise ECG, then it is government negotiating everything..." (D).

"I think it's really job security, first of all. Maybe pride a little bit, but job security and mistrust of whoever is coming in, that, they are simply coming to make money on top of their labour" (F).

"Everywhere you want to introduce change there is opposition. When we meet ECG and we talk, we say we understand because nobody wants it. You know what the situation is but then we are not sure about what happens tomorrow" (G).

"I'm sure the news is out there, half information and people adding their own stuff... Maybe, people are not well informed. They don't know what is happening. For me, I always use the example of the telecom. I feel that is the model that we have to use." (A).

Stakeholders in favour and against potential policy



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2. Improved management of ECG. Implementation limited due to:

- ❖ Powerlessness of government to resist external pressure associated with financial assistance
- ❖ Lack of support to create the enabling environment for the policy implementation by government

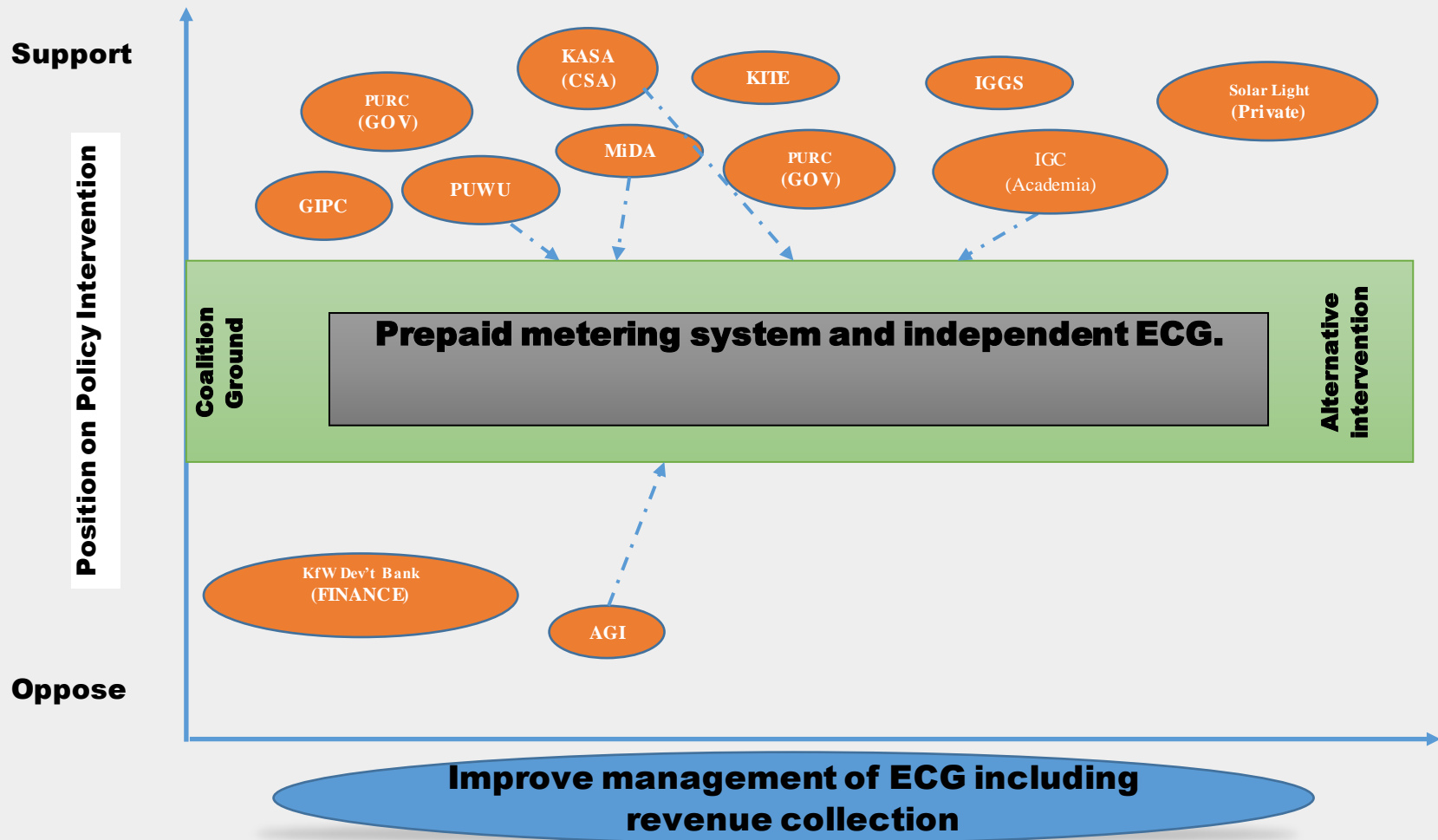
“When something is coming from outside Ghana we are going to push back easily, good or not. So, what would have been nice is for us to recognize that the way we run these parastatals over the years has been wrong. So we need either a government that is mature enough to step out and say no” (F)

“I will say that the reason why some people are kicking against it (privatisation) is because of government. Because they feel that government is the cause of the problem so don't blame it on ECG. Government owes ECG so much and they feel if government can put in place measures to curtail this, then ECG can operate efficiently” (A).

“But the issue is that it's something the government of Ghana has committed itself to in an international treaty. The MCC Compact II is an international treaty governed by international law so it supersedes even the local laws. It also supersedes the Americans own law. It's not one way, it supersedes our and the American law because it is an international treaty. This is not being pushed because it is an international treaty” (G).

“.....The bottom line is that ECG has to be restructured. It has to go through a different model of management to make it more efficient, for which they can guarantee off-taking of renewable technology” (F).

Stakeholders in favour and against potential policy



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3. Establishment of a competitive off-taker market in the power sector. Implementation limited due to:

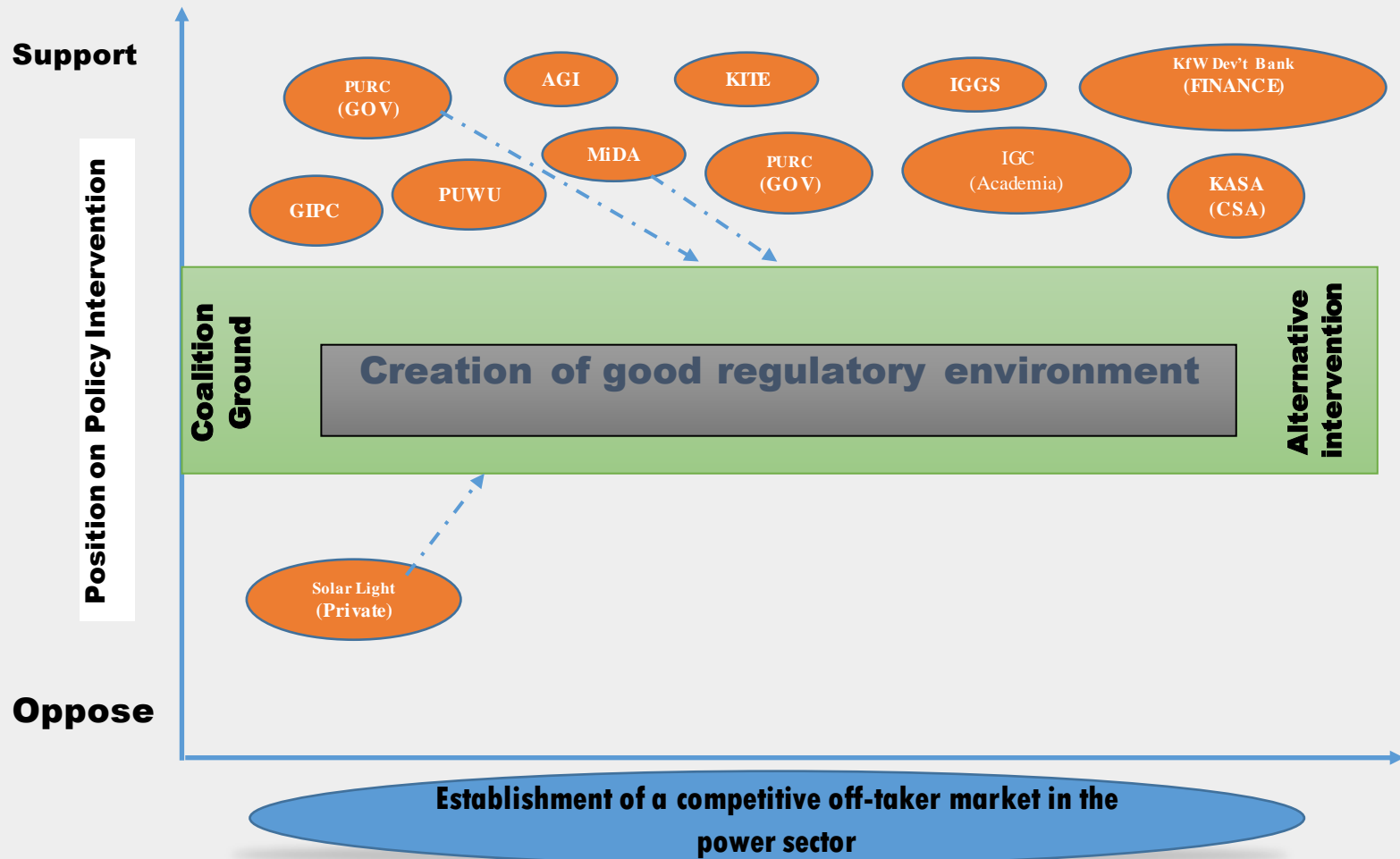
- ❖ Inadequate incentives and resources for its establishment
- ❖ Lack of political will to drive the process
- ❖ Technical challenges

“I think it has been discussed but we don't see the will to do that. People are not willing to leave that hold of power where you can influence the granting of licenses from the Energy commission or any other because obviously if you don't have 'connections' it is difficult to get a license in Ghana if you don't have a push backing from the political side, there can be noise about it but you are not going to get a license” (D)

“You take a look at the feed in tariff as approved by the PURC and see whether they can compete with the conventional system. It is only the biogas and others that appear to be a bit competitive. So if the off-taker is given a free will to choose where he takes his supply from and there is no compulsion, ideally they won't go in for renewables because then, unless they will be able to sell it on and get their money” (C).

“It depends on how the infrastructure was built. If for instance Asogli wants to supply Accra Central, does Asogli need to develop its own infrastructure? Let's say I want to be an off-taker then I need to build my own system because ECG and Asogli also use that system. So when the energy goes into it, I don't know how it is going to be differentiated.” (E).

Stakeholders in favour and against potential policy



FAULTY POWER SECTOR REGULATION CONSTRAINT

❖ Challenges related to Ghana's power sector regulation landscape undermine RE investors' confidence.

❖ Potential policies to address this constraint:

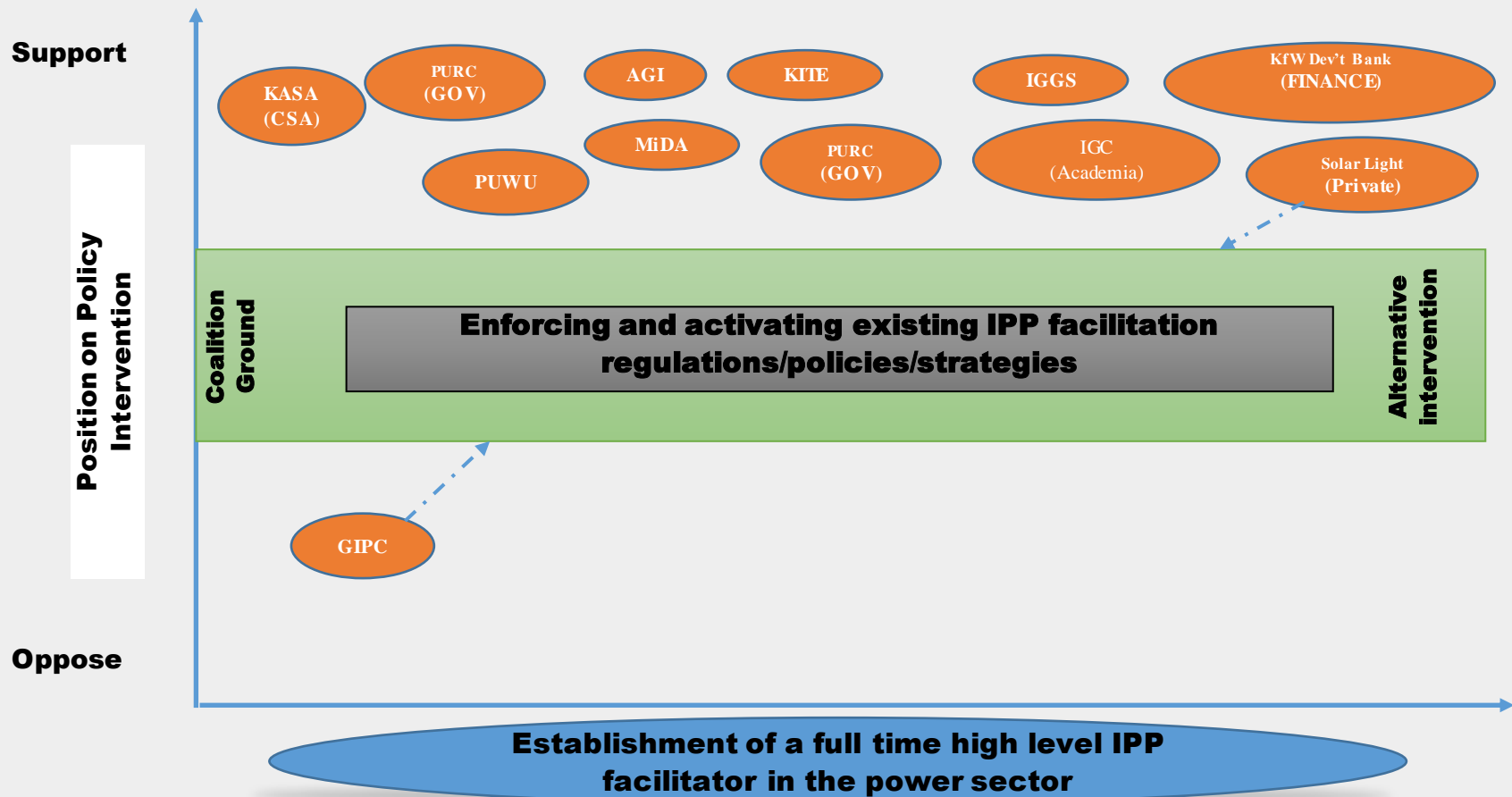
1. **Establish a full-time high level IPP facilitator in the power sector. Implementation limited due to:**

❖ **Extra cost dimension**

"Is it even necessary if we have the energy commission to deliver that? That is going to be another cost on the process, because EC will still be there to regulate the sector which we are paying them for. Another body will also be charging for accessing their services and that also becomes another cost on the deployment of the technology. I don't think it is too big a role for the EC to deliver. But I think the energy commission is not also thinking outside the box to promote renewables"(D).

"Negotiation for PPA cannot be done by somebody else. It is the investor himself that should do the negotiation. So, that I believe will be out of the equation. Again, when it comes to the environmental impact assessment, I believe the investor should be involved. We can have that for some of the processes but there are some others that the investor himself will have to be involved in" (A).

Stakeholders in favour and against potential policy



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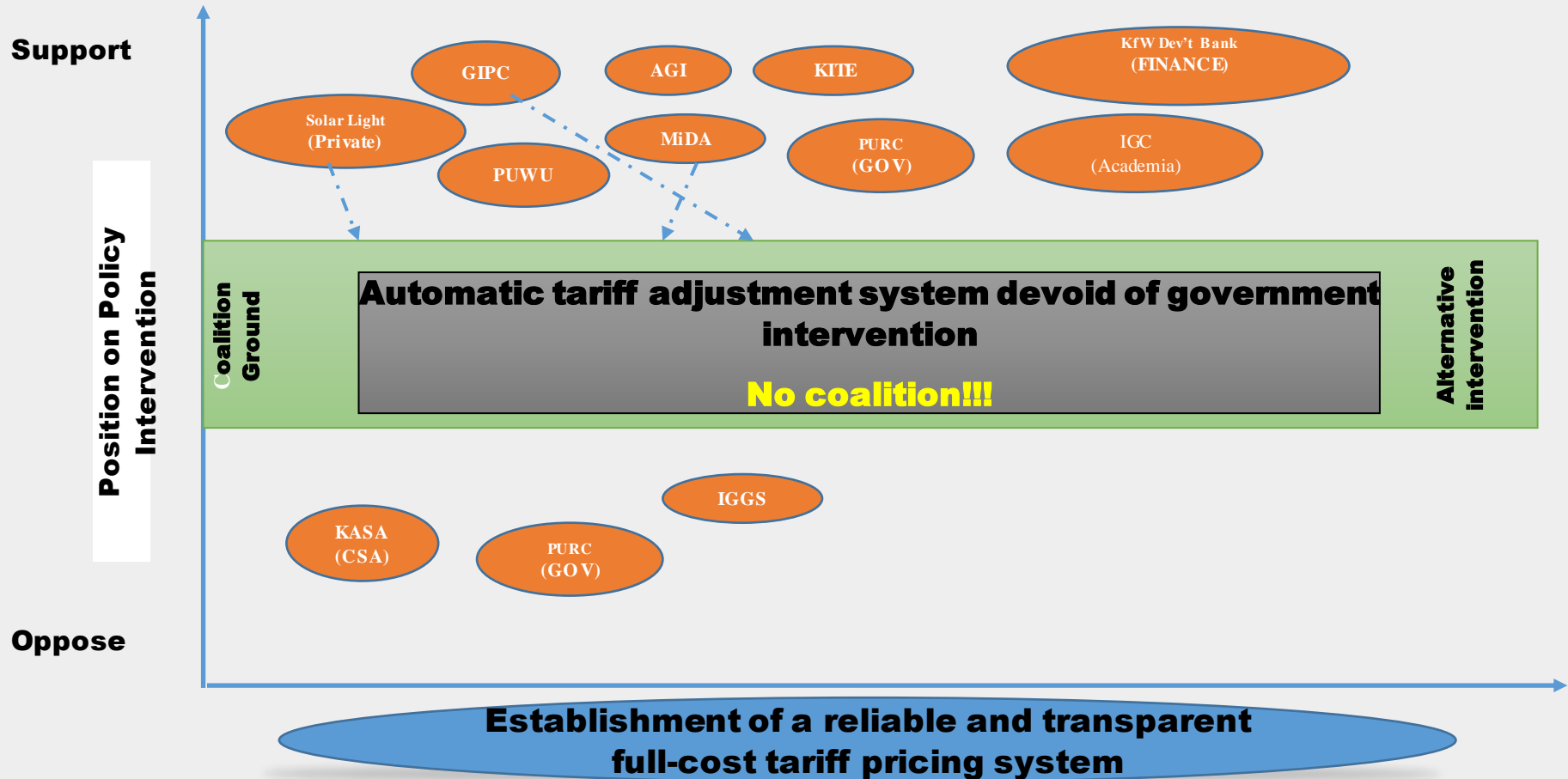
2. Establishment of a reliable and transparent full-cost tariff pricing system. Implementation limited due to:

- ❖ Unaffordable argument
- ❖ Electricity regarded as a public good

“So we start from the perception of electricity as a public good. Then it means government has to have a hand in it... it means we the consumers also expect it to be cheap. You know, it’s a right. Clean water? Yes. Good health, access to health care? Yes. Electricity? Not necessarily”
(F)

“.....if we don’t stop seeing the energy sector as a social service and treat it as business, we will run into this challenge. If you want to talk about social equity and how everybody has to have access, fine., but should not be treated as a public good” (C).

Stakeholders in favour and against potential policy



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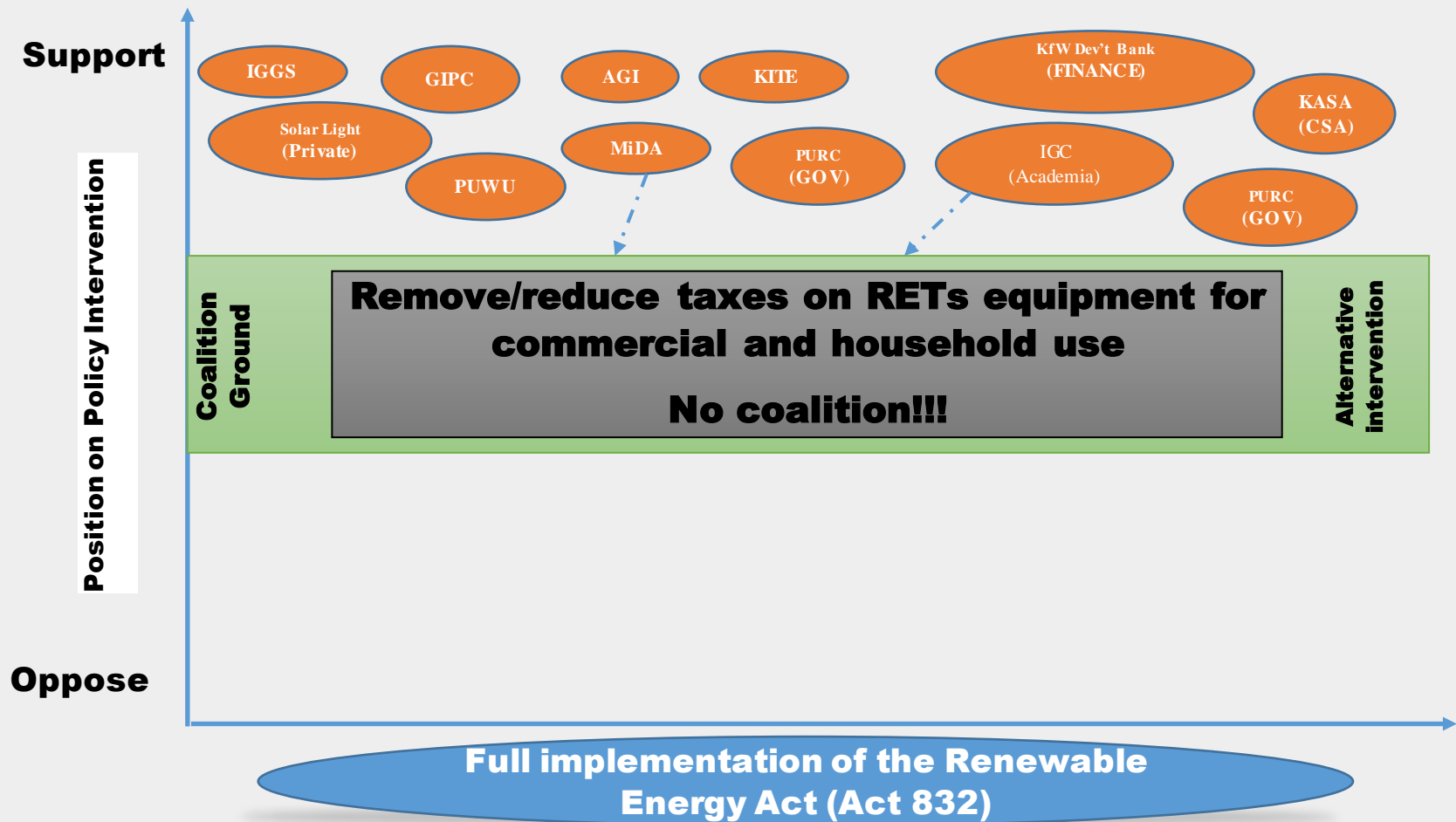
3. **Full implementation of the RE Act (Act 832) and its enshrined subsidiaries. Implementation limited due to:**

- ❖ **Non-incentivizing approach to RE development**

“.....countries like the UK and the US, they never went straight through the market route where you allow the market forces to determine the place of renewables. There were incentives mechanisms through the FiT with the obligation to pay. We cannot do otherwise because our scenario is even more complicated” (C).

“Some investors have challenges with the feed in tariff. Some people say I am bringing solar with modified technology and you want to give me the same price as somebody who is using ordinary solar panels. If I am providing backups or storage, would it be the same price as somebody who is just feeding into the grid and when the sun is down he is down? So those are the issues” (B).

Stakeholders in favour and against potential policy



LACK OF ACCESS TO APPROPRIATE FINANCE

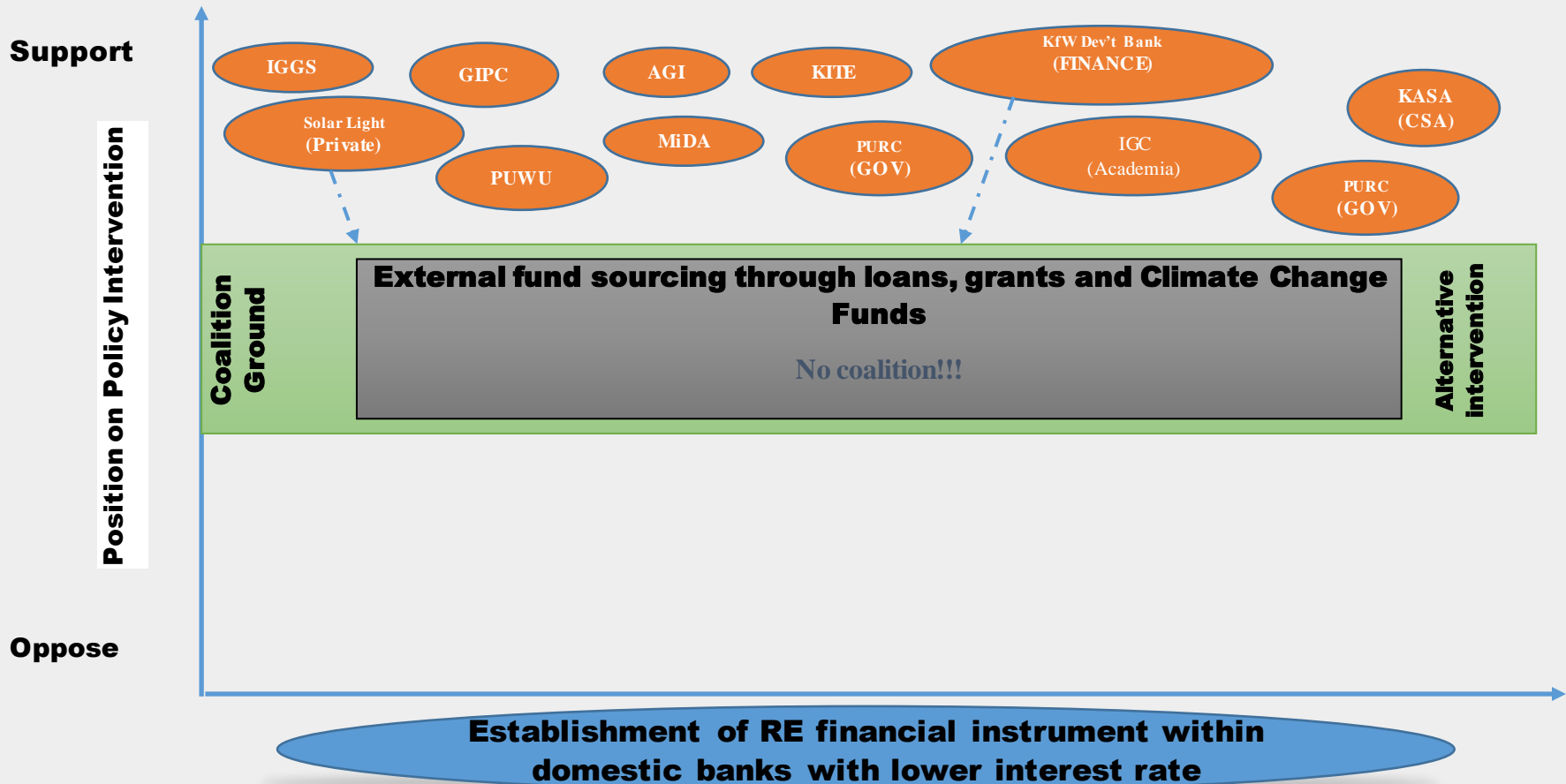
❖ **A fundamental factor underpinning the lack of appropriate finance in Ghana and thereby affects renewable energy investment is**

❖ **Low financial portfolio of domestic banks.**

✓ **This puts banks at risk if they give out the type of huge credits that are needed by investors to undertake investment in renewable energy**

❖ **High interest charges on credit facilities and the inability of domestic banks to undertake long term financing are mostly as a result of macro –economic risk such as inflation**

Stakeholders in favour and against potential policy



GHANA AND KENYA – REFLECTIONS ON ELECTRICITY GENERATION TRENDS - 2015

PLANT	GHANA	KENYA
TOTALLED INSTALLED CAPACITY	3658.7 MW	1885 MW
% Share of Hydro	1580 (43.18)	813 (43)
% Share Thermal	2053 (56.11)	791 (42)
% Share of RE	25.7 (0.70)	277.3 (14.3)

COST AND RETURNS OF RENEWABLE ENERGY : A COMPARISON OF KENYA AND GHANA.

KENYA

Cost of RE is lower

Wind and Geothermal energy offer higher returns

RE potential is high

Higher success of implementing RE project

GHANA

Cost of RE is higher except at levelised cost of energy (LCOE)

Hydro offer better returns but is threatened by climate change

RE potential is high

Lower success of implementing RE project



CONCLUSIONS

□ Key interventions to achieve full implementation of potential policies

Constraint	Potential Policy	Interventions
Off-Taker Risk	Privatization of the revenue arm of the power sector.	<ul style="list-style-type: none"> ➤ Encourage broad consultation and also make it reflective of the country needs. ➤ Undertake proper sensitisation about the need for the implementation of the policy.
	Improved management of ECG including revenue collection (especially revenue from debtors – government and others)	<ul style="list-style-type: none"> ➤ Government willingness to eliminate subventions and interference from the sector ➤ Encourage the development of comprehensive plans and strategies even before soliciting for financial aid especially, from donor organisations.
	Establishment of a competitive off-taker market in the power sector.	<ul style="list-style-type: none"> ➤ Political will to create the enabling environment for public, private sector participation to address the resource constraint of government. ➤ Embrace knowledge and technology diffusion

Key interventions to achieve full implementation of potential policies

Constraint	Potential Policy	Interventions
Faulty power sector regulation	Establish a full-time high level IPP facilitator in the power sector.	➤ Strengthen the Energy Commission of Ghana to become more autonomous and independent.
	Establishment of a reliable and transparent full-cost tariff pricing system	➤ Eschew public good ideology created by politicians and promote energy efficiency programmes especially at rural areas to address affordability concerns.
	Full Implementation of the RE-Act and its enshrined subsidiary instruments (Net-metering, mini-grid systems, and the RE fund and levies)	<ul style="list-style-type: none"> ➤ Promote and implement findings of local research that unearth better ways to implement subsidiary instruments such as net-metering, mini-grid and Feed-in tariff. ➤ Synchronization of all energy policies to determine how renewable energy will be rollout to eschew political favouritism against renewables.
Lack of access to appropriate finance	Establishment of RE financial instruments within domestic banks by Government with lower interest rates	➤ Strengthening fiscal and monetary instruments in the country to reduce policy rates given to domestic banks and subsequently curb high interest charges on credit facilities.

THANK YOU
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