The Role of Public Finance in CSP: Lessons Learned

CIF Partnership Forum, 23-24 June,
Montego Bay, Jamaica

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Introduction

Why CSP and challenges for scaling-up

- **Why CSP?**
  - Low-carbon electricity
  - Heat storage → base load and peak load power
- **Challenges for scaling up CSP**
  - Viability gap: High costs of technology
    - High policy costs (for public)
    - High policy risks (for private)
  - Risk gap, particularly in emerging economies
    - Financing risks (due to high capital costs)
    - Technology risks (due to low experience with CSP)
  - Knowledge gap (policies and technologies)

Key questions for the analysis

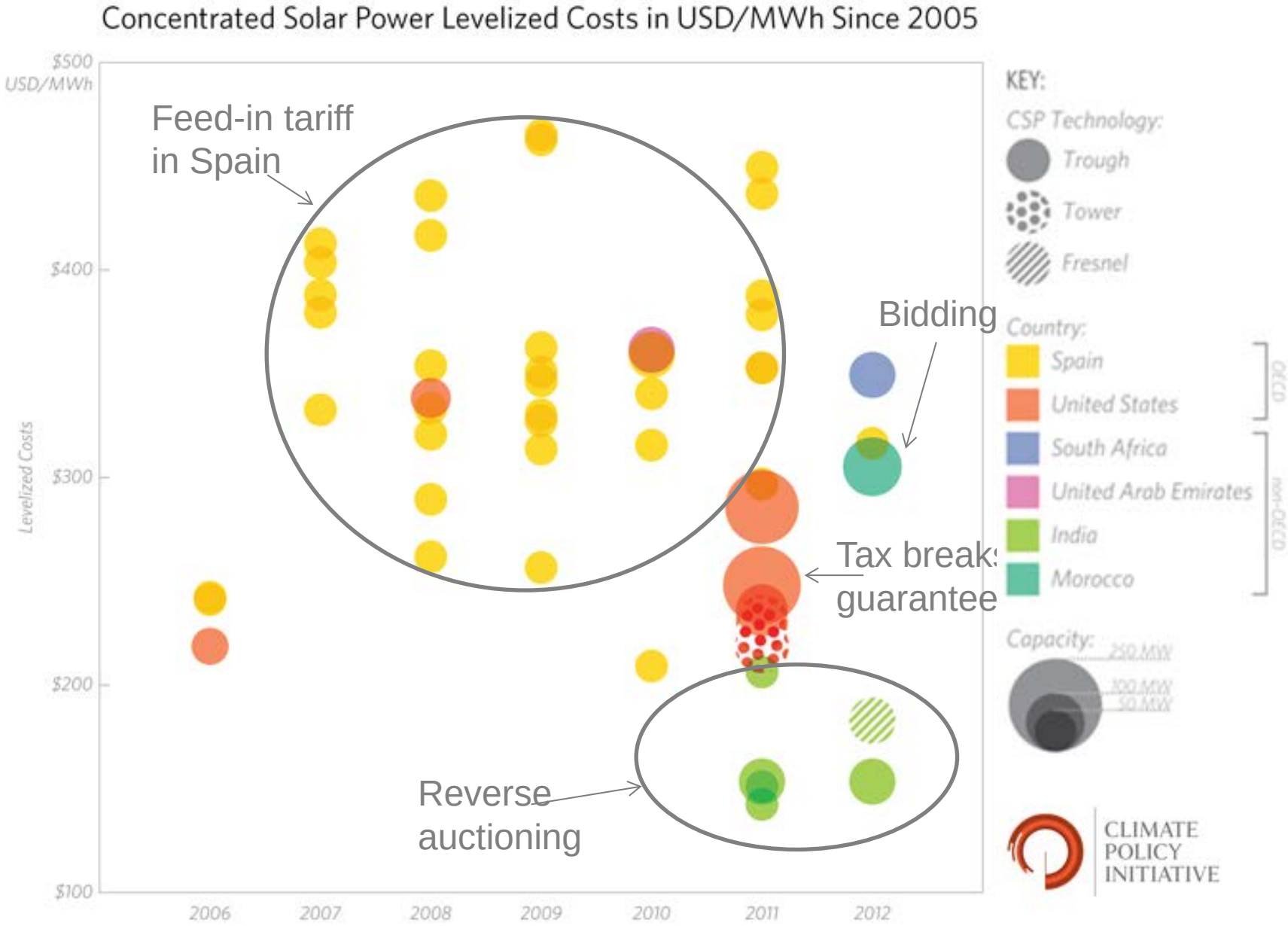
- **When** is **public support** needed for CSP?
- **How effective / cost-effective** are different **policy tools**?
- How can **international public finance** best support national policy efforts?
- How can public support drive **long—term cost reductions** and ensure scale up?

Approach

- **Case studies**: financial model, risks, effectiveness, scale-up
  - **Morocco: 160 MW Noor 1**
  - **India: 100 MW Reliance Power in Rajasthan**
  - **South Africa: 100 MW Eskom Upington**
  - **Spain CSP Market** (not project)
- **Dialogues:** sharing, discussing and learning from experts
  - Venice, September 2013
  - Abu Dhabi, January 2014
  - Washington DC, May 2014

National policies

CSP National Policies: Why do they matter?



CSP National Policies: Lessons on effectiveness

Policymakers can make national policies more effective in encouraging CSP deployment if they:

- Provide **sufficient** financial support to **close the viability gap**
- Make support **sustainable and stable** over time.
- Ensure **availability of low-cost and long-maturity debt** to address financing risk
- Promote involvement of **local actors with long-term policy signals** rather than local content requirements
- Ensure **reliable on-site solar irradiation data**

CSP National Policies: Lessons on cost-effectiveness

Policymakers can also ensure low cost of CSP policy support, if they:

- **Tailor the level of support to the real technology costs**
- **Align public and private actors' financial interests** to reduce the perception of policy risk
- Consider **low-cost and/or long-term debt** to support renewable energy deployment economically

International public finance

International Public Support: Lessons on deployment

To enable CSP deployment, international finance can:

- **Mitigate those risks that the private sector is not yet willing to bear**
- Help **close the viability gap where single countries are unable to bear the full cost**
- **Provide knowledge on policy tools and technology** to **local decision makers**

International Public Support: Lessons on effectiveness

To increase the effectiveness of international public finance in enabling CSP investment, IFIs can (help)

- **Reduce the costs for hedging foreign currency**
  - By partially denominating tariffs in foreign currency, governments can significantly reduce currency risks of foreign public debt for private investors
- **Adjust requirements according to a technology's requirements of development and the country context**
- **Speed deployment by taking a harmonized approach** (e.g., when multiple IFIs involved)

Long-term scale up and competitiveness

A Roadmap to drive cost reductions and ensure scale up of CSP

All policymakers

- Provide high enough support but linked to falling CSP costs
- Cover risks of novel technology
- Initiate transition to local and private debt

National policymakers

- Complement viability gap funding with public (low-cost) debt
- Remunerate system benefits

International policymakers

- Focus public finance on countries with high willingness to support CSP

Join forces to buy down the learning curve

(5-15 GW)

Economies of scale & learning

Planning certainty (if road map)

→**Cost reductions**

CSP long-term scale up: Lessons

Policymakers can drive CSP scale up and cost reductions if they

- Focus international public finance **on countries with high political willingness to deploy CSP and a need for external support**
- Concentrate international finance on **specific technologies**
- Ensure **public support** is **attractive** enough but **linked to falling technology costs over time**
- **Initiate the transition towards more private and local debt** to secure long-term finance and reduce currency risk
- **Remunerate the systems benefits** of the stable and flexible power supply provided by CSP
- Consider the **social costs of carbon** in comparisons

Conclusions

When is public support needed?

- **Viability gap**
  - Public support needed in all cases (geographies, technologies) to close the viability gap
  - Different tools (feed-in tariffs, grants, tenders)
- **Risk gap**
  - To address risks of early stage but promising technology (e.g. power tower, storage)
  - To address risks in countries with low experience and unfavourable terms on capital market
- **Knowledge gap**
  - If capacity on policies and technologies can be transferred

...helping nations spend their money wisely

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