



Background and Approach of Study

Stakeholder Consultation Workshop
“Policy Development to Support Solar Cooling in Thailand as Demonstration Project in Southeast Asia”



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Date: 22nd October 2013

Agenda

- What is a **'Policy Package'**?
- Policy Interventions for RE/EE
- Financing Constructs
- Background of the study
- Key tasks
- Overview of the report

Elements of a Robust Policy Package

How a firm designs, delivers and captures value

- Customer selection, offerings and value proposition, in-house/outsource activities configuration of its resources, revenue model, cost model

Business Model

All 3 factors are closely linked.
The policy package will need to align the 3 aspects.

Also need to align policy based on maturity of technology/applications-
Research → Demo → Replication → scale up

Policies

Regulatory 'support' / 'obligations'

- Support such as tax benefits, tariff supports, subsidies, environmental credits etc.
- Obligations such as codes and standards, mandates, taxes

Financing

Structures, Means of receiving and servicing Finance

- Equity, debt (loans, bonds) mezzanine finance
- subsidies, grants
- Guarantees
- Risk insurance products
- structured finance; securitized cash-flows
- Structures to receive money, repayments etc in a tax efficient manner (e.g MLPs, trusts)

General RE/EE Policy Interventions

E.g., Building codes, Fuel efficiency standards

Codes,
Standards

Obligations

Tariff
Support

Subsidies

Tax
benefits

Guarantees

Other
support

- Obligations of energy users to use x% of RE or improve EE by x%. Credits to those who get better than obligations. E.g., RPO, EEO, GHG Norms
- Corresponding credits- REC's, CERs, ECERTs etc

E.g., FiT, Tariff discounts on overall energy bills for RE /EE generation or equipment installation

- Capital Investment subsidies
- Interest cost subsidies

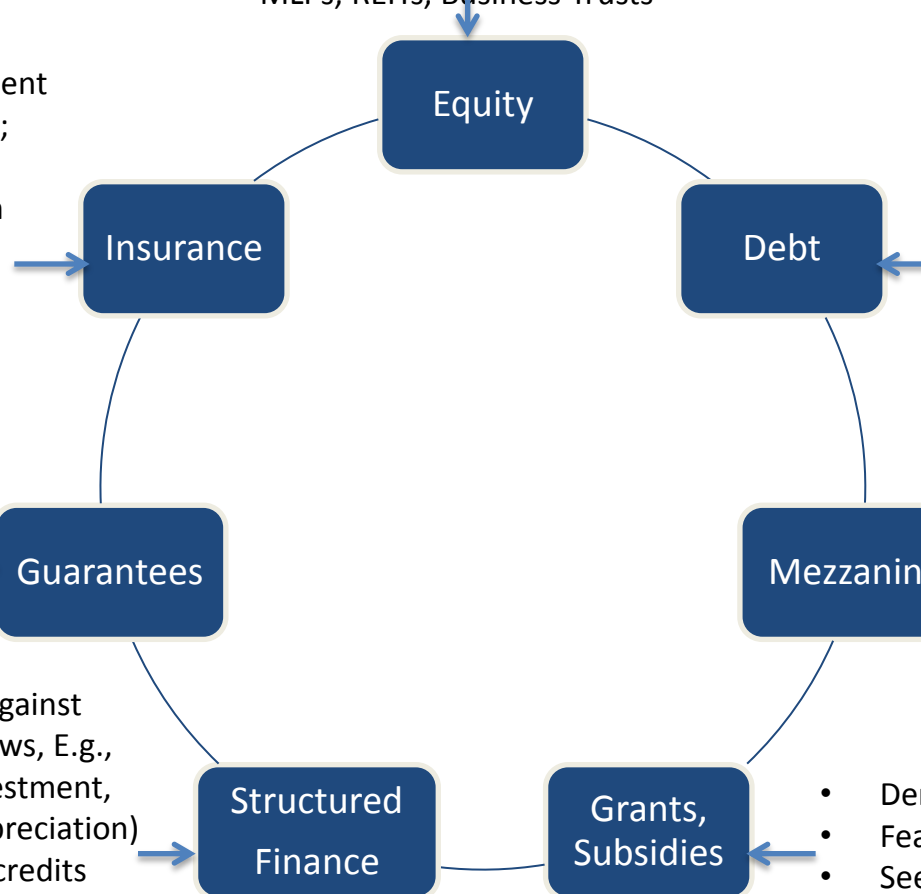
- Accelerated Depreciation
- Investment Tax credit
- Production Tax credits
- Income tax exemptions
- VAT waivers; custom duty waivers
- Property tax concessions
- Transferable Credits

- Technical Assistance grants for feasibility assessments
- Training Assistance
- Standard tools and technical specifications
- Dedicated funding source for program development
- Voluntary commitments
- User Education

- Guarantees (partial, full) on loans
- Special insurance cover for investments

General Financing Options

- Private/venture, DFI, Corporate equity
- Sovereign Wealth Funds, Insurance companies, Pension funds etc.
- Capital markets;
- MLPs, REITs, Business Trusts



- Bank Loans
- Bonds- corporate, portfolio (SPV)
- Debt Funds
- Construction finance, take out finance, supplier credit/ buyer credits (Exim)

- Preferred stock
- Convertible stocks/ debentures

- Demonstration
- Feasibility
- Seed grants
- Grants under special program

- Finance arranged against securitized cash flows, E.g.,
- Tax credits (investment, production, depreciation)
 - Environmental credits (RECs, CERs)

- Insurance against Government Defaults (FIT, Subsidies etc);
- Political risks, risks of government interference in arbitration proceedings, judicial risks etc.

- (Partial) Risk Guarantees
- Credit Enhancements
- Loan guarantees (E.g., Exim)

- **Purpose of the Study:**

- Policy Development to Support **Solar Cooling** in Thailand as Demonstration Project for Southeast Asia

- **Significance of the Study:**

- The study will help develop a policy package for solar cooling in Thailand and evaluate the most relevant sustainable business model customized for Thailand
- The policy will encourage innovative use of solar cooling
- The policy package will aim to facilitate businesses to implement solar cooling in Thailand and hence:
 - Reduce peak power generation requirement during sunny hours of the day
 - Promote savings in industry and private sector
 - Reduce the economical and financial impact of energy imports
 - Avoid investment in new power generation and transmission
 - Reduce GHG emissions associated with cooling

- ☐ Solar cooling technology review
- ☐ Review of global best practices and relevance for Thailand
- ☐ Detailed review of existing policies and projects in Thailand
- ☐ Overview of business models and support mechanisms (policy interventions)
- ☐ Development of business model evaluation framework
 - ☐ Assessment in conjunction with Thai business environment
- ☐ Evaluation of barriers to implementation
- ☐ Development of customized business model and policy package



FEEDBACK from the stakeholder Consultation Workshop



Policy Implementation Scenarios and Roadmap

Solar Cooling Overview

- Technical Overview
- Solar Electricity Photovoltaic Based Cooling System
- Solar Thermal based Cooling
- Global Practices

Solar Cooling in Thailand

- Rationale For Solar cooling in Thailand
- Review of existing policies
- Existing Solar Cooling Projects in Thailand
- Stakeholders for Solar Cooling in Thailand
- Barriers in Solar Cooling in Thailand

Business Model Development

- Overview of existing business models
- Overview of Supporting Policy Mechanisms
- Evaluation methodology
- Benchmarks
- Barriers to implementation
- Proposed business model

Proposed Solar Cooling Policy Implementation and Roadmap

- Policies and Supporting Mechanisms
- Regulatory Schemes
- Financial Schemes
- Awareness and Education
- Policy Implementation Scenarios and Roadmap

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Thank You...