

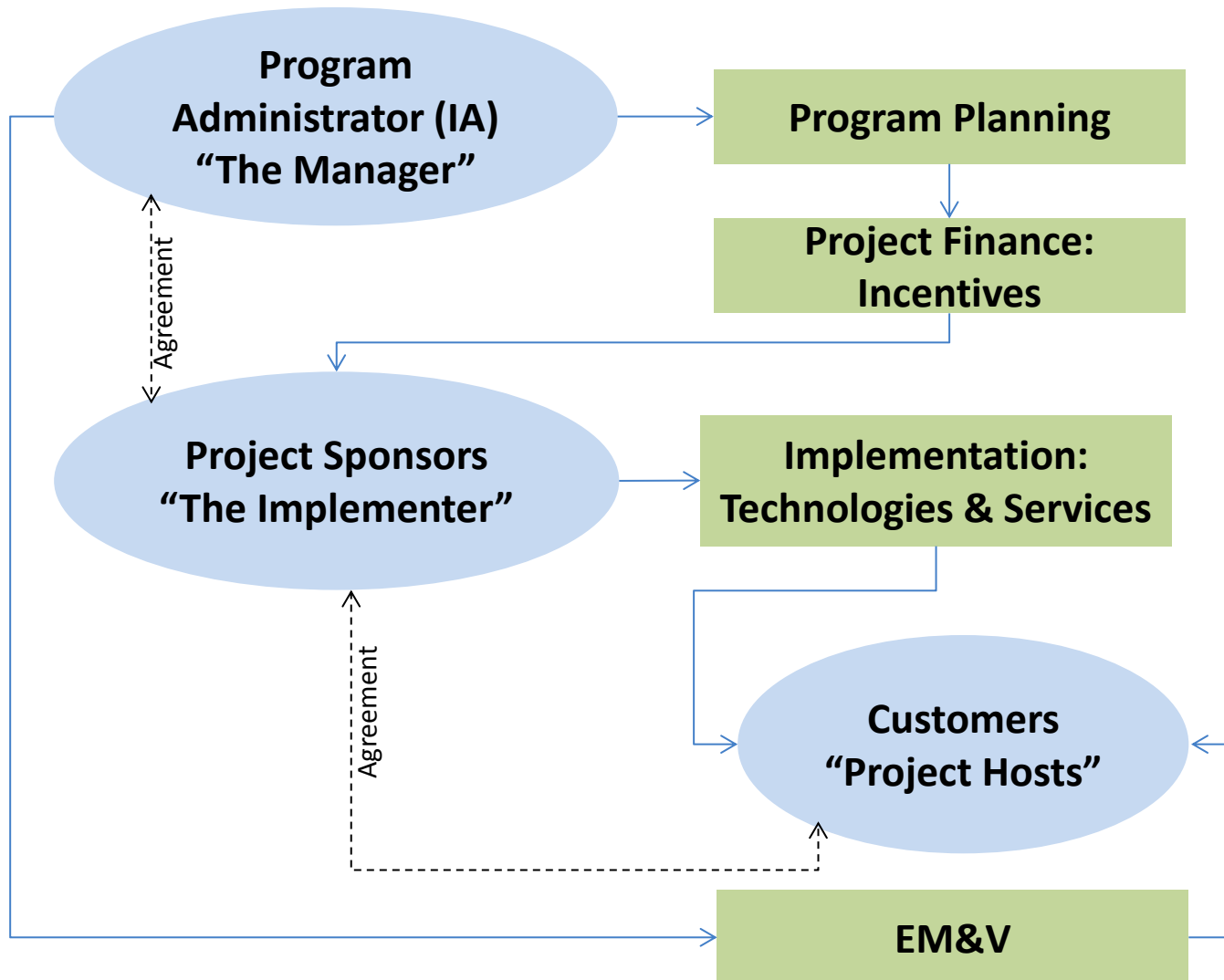
**Workshop on Design of the Standard Offer Program (SOP) Pilot
Organised by the Thai-German Programme on
Energy Efficiency Development Plan (TGP-EEDP)
17 December 2014 (08.30-16.30)
Eastin Grand Hotel, Sathorn Bangkok, Thailand**

Technical Input for Group Discussion

Session A2: Model of Program Participation

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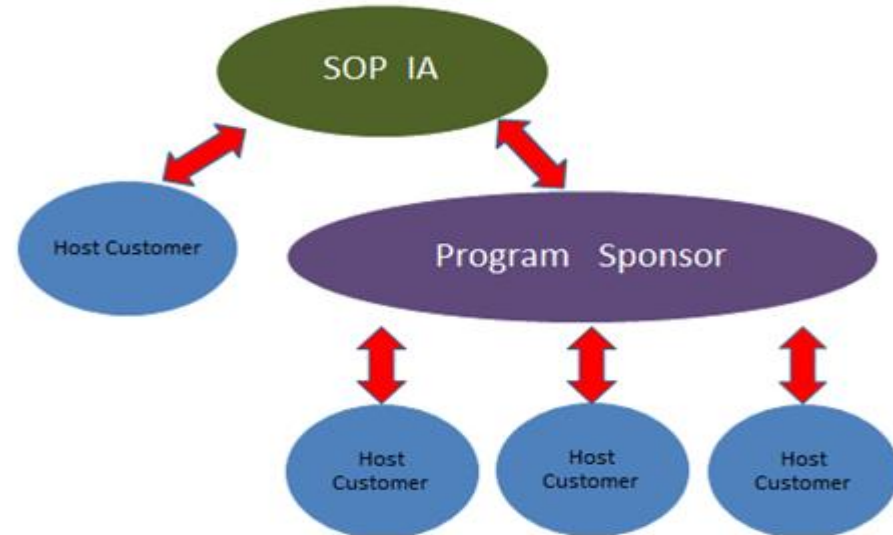
Ecosystem of Standard Offer Program in US



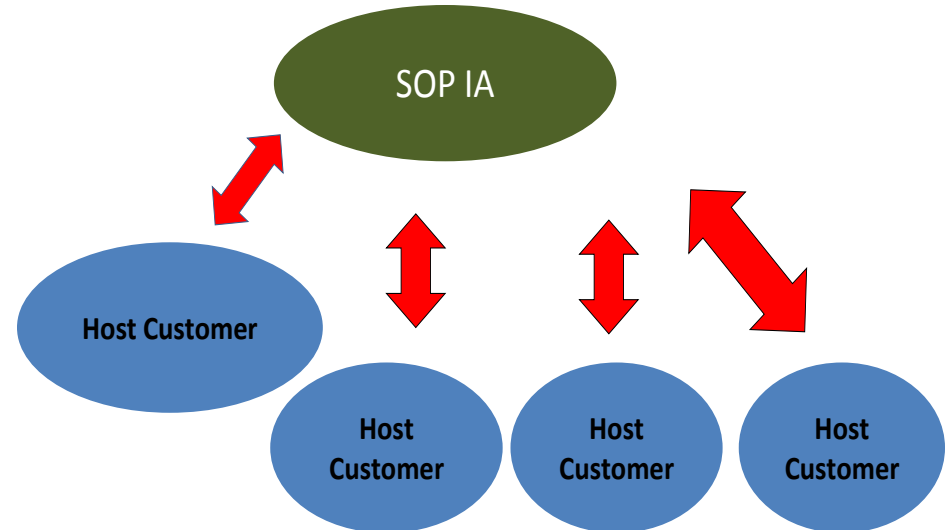
Source: Nexant

Session A2 : Model of Program Participation

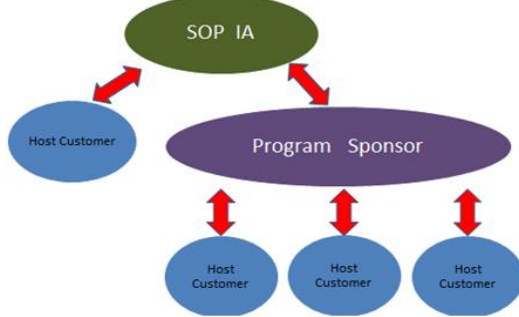
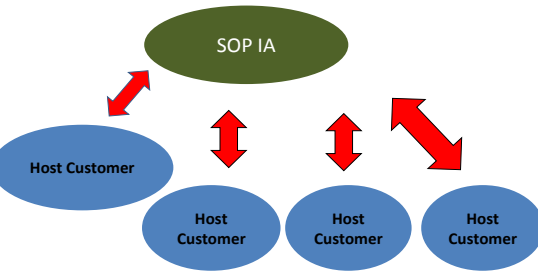
Option 1: *The structure allows host customers to participate either through a project sponsor or directly through the IA*



Option 2: *The structure allows every host customer to participate directly to the IA (no program sponsor)*



Session A2 : Model of Program Participation

<p>Option 1</p> <p>The structure allows host customers to participate either through a project sponsor or directly through the IA</p>	<p>Option 2</p> <p>The structure allows every host customer to participate directly to the IA (no program sponsor)</p>	<p>Other Ideas and Options</p>
		
<p><u>Advantage(s):</u></p> <ul style="list-style-type: none"> flexible model because customers can participate through sponsor whose function is to facilitate and advise them in program process while capable customers may choose to participate by themselves. model with program sponsor is a market driver for ESCO business to penetrate residential and SME sector. 	<p><u>Advantage(s):</u></p> <ul style="list-style-type: none"> similar concept with DEDE's 80/20 program customers can get full subsidy 	<p><u>Advantage(s):</u></p>
<p><u>Disadvantage(s):</u></p> <ul style="list-style-type: none"> increase M&V requirement steps increase administrative effort 	<p><u>Disadvantage(s):</u></p> <ul style="list-style-type: none"> increase administration effort for IA to manage large number of customers. not really drive ESCO market 	<p><u>Disadvantage(s):</u></p>

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Session B2: Setting SOP Incentive Levels

Background

- SOP is similar in some ways to a Feed-in-Tariff (FiT) for energy efficiency

HOWEVER,

- Unlike a renewable energy FiT, the SOP incentive is typically paid in just the first year
- KMUTT study recommended an SOP incentive level of THB 1.59/kWh

KMUTT Methodology

- **Calculated total avoided cost**
 - EGAT avoided cost of non-firm SPP power (THB 3.31/kWh)
 - GHG impact (envir. externality) (THB 0.22/kWh)
 - Health externality (THB 0.71/kWh)
 - **TOTAL = THB 4.24/kWh**
- Total Resource Cost (TRC) calculation
 - TRC = 75% x (total avoided cost)
 - = THB 3.18/kWh**
- SOP incentive = THB 3.18/kWh x 50%
 - = THB 1.59/kWh**

Design of Incentive Levels: Important Terms

Element	Definition
Avoided Costs	The forecasted economic benefits of energy savings. These are the costs that would have been spent if the energy efficiency had not been put in place.
Energy Savings	The energy savings estimated as a result of the energy efficiency measure/project implemented.
Demand Savings	The demand savings estimated as a result of the energy efficiency measure/project implemented.
Capital Cost	The cost to the customer to implement the energy efficiency measure/project.
Net Present Value	The value of a stream of cash flows converted to a single sum in a specific year, usually the first year of the analysis. It can also be thought of as the equivalent worth of all cash flows relative to a base point called the present.
Discount Rate	A measure of the time value of money. The choice of discount rate can have a large impact on the cost-effectiveness results for energy efficiency.

Basic Steps in Process

- **Step 1: Gather Basic Data on Measure**
 - Identify energy and demand savings associated with the implemented measure.
 - Understand the capital cost associated with the implemented measure.
- **Step 2: Utility Perspective**
 - Determine the avoided costs for the measure.
 - Calculate the avoided cost benefit in terms related to the energy savings of the measure being implemented.
- **Step 3: Customer Perspective**
 - Calculate the capital cost benefit of the measure related to the energy savings of the measure being implemented.
- **Step 4: Set Ceiling and Boundaries**
 - Set the incentive *ceiling* based on *Avoided Costs* and then *boundaries* based on *Capital Costs*, in order to establish a range of reasonable incentive levels

Thank you



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