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PRICE STRUCTURE (RATE DESIGN)

Parties have asserted that a feed-in tariff (FIT) price may be established using one or more of several approaches (e.g., seller's cost, buyer's avoided cost, auction, bi-lateral negotiation, market price referent, other). Once the approach is determined, there are a variety of ways in which the price may be paid over the term of an agreement. The price structure, or rate design, may affect elements of the transaction, (e.g., incentives for performance), and may fulfill various interests of the parties (e.g., transparency, simplicity).

Respondents shall, and parties may, address the following issues to assist the Commission consider possible further implementation of price structure (rate design) as it related to an FIT. Brief discussion is provided with some items to help parties consider the item, but the discussion is neither intended to be complete nor limit parties' considerations. In particular, comments should identify and discuss the following 14 items:

1. Who are the stakeholders with respect to the FIT.
 - For example: buyers (ratepayers, utilities, load serving entities), sellers (project developers, venture capitalists, equity holders, debt holders), society.
2. What are the interests of those stakeholders relative to the FIT.
 - For example: least cost/best fit, just and reasonable rates for safe and reliable electricity that is available when demanded by the customer, reasonable project performance, performance that aligns with demand now and over time, assurance of project cost recovery, profit maximization with a high degree of risk (e.g., venture capitalist), profit maximization with medium degree of risk (e.g., equity holder), revenue security to ensure interest payments (e.g., debt holder), never overpaying relative to the current market

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(e.g., ratepayer), never receiving revenues less than justified by current market prices (e.g., project), conservation, efficiency, equity, transparency, simplicity, equitable allocation of risk between stakeholders, certainty/stability.

- In your response, please align interests with stakeholders.
3. What price components may be used in various pricing approaches and structures, and what are the advantages and disadvantages relative to each price component.
- For example: components may be energy rate (cents/kWh), demand rate (dollars/kW/year), fixed payment (dollars per month, dollars for installed capacity, dollars for resource adequacy, dollars per customer), adjustments (e.g., time of delivery factors; energy rate, demand rate and/or fixed payment tied to an index to periodically adjust to market).
 - For example: an advantage of energy rates may be that they pay for performance; an advantage of adjustment mechanisms may be that they track some or all payments with changes in the project's variable costs (to the extent those costs move with the market); an advantage of fixed payments (dollars per customer per month) may be that they track a project's fixed costs; a disadvantage of fixed payments may be that they do not align with performance.
4. What is the best combination of price components to meet stakeholder interests.
- Please identify the price components that apply, or should apply, to FIT prices, and the best combination of components.
5. If there are competing stakeholder interests, what is the best combination of price components to reasonably balance competing interests.
6. Discuss whether or not the Commission should state a preference for certain price components and price structures to be used in a Commission-adopted FIT. If so, identify and discuss which components and structures should be preferred by the Commission.

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7. Discuss whether or not the Commission should require certain price components and price structures to be used in a Commission-adopted FIT. If so, identify and discuss which components should be required by the Commission.
8. State anything else that is material and relevant to the issue of pricing structure (rate design) for a Commission-adopted FIT

In addition, please comment on the following specific examples for a twenty year contract. Each example applies to any FIT pricing approach (e.g., price based on seller's cost, buyer's avoided cost, auction, bi-lateral negotiation, other).

9. Example A:

If the sole or primary interest is to ensure cost recovery for the project, the optimal payment may be a lump sum at the commercial operation date. Please comment.

10. Example B:

If the project has both fixed and variable costs and the sole or primary interest is to ensure cost recovery for the project, the optimal payment may be a lump sum at the commercial operation for the fixed costs and payment of variable costs as incurred over time. Please comment.

11. Example C:

Assume that the primary interests are revenue certainty for the seller, conservation (i.e., optimal use of resources), efficiency and equity. Assume that the selected payment structure is a combination of fixed (e.g., dollars per month) along with demand and energy prices; the demand price (dollars/kW per month) is at a fixed level (dollar amount) in the contract for the life of the contract and paid upon performance (delivery); the initial energy price (cents/kWh) is fixed in the contract, payment varies by time of delivery (TOD) based on TOD factors, is paid based upon performance (delivery), and the energy rate is adjusted to the market once every 5 years. Under this price

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structure, perhaps the fixed payment provides revenue security for the project; the demand and energy rates provide an incentive for performance; and the periodic adjustment to the market provides assurance to both the project and ratepayers that prices never vary too drastically from current market realities while the seller's variable costs (to the extent they vary with the market) are recovered without over- or under-payment, thereby promoting efficiency and equity. Is this an optimal price structure? Please comment.

12. Example D:

Assume the price structure is an energy payment only, and the initial average overall price is \$0.25/kWh to be paid by TOD factors set in the standard contract. To balance competing interests (e.g., revenue security, conservation, efficiency, equity), assume the payment is 80% fixed and 20% variable. That is, \$0.20/kWh is paid for each delivered kWh over the life of the contract. The remainder, \$0.05/kWh, is paid the first 5 years, and is then subject to adjustment to reflect the current market (e.g., formula in the contract that based on an index to model seller's variable costs), and is adjusted again at years 10 and 15. The TOD factors are updated once at year 10 to align with the current TOD profile of the buyer.

This price structure might satisfy several interests including (a) simplicity (i.e., based only on energy price), (b) providing some certainty to the seller of the payment type (energy only) and amount (with 80% fixed and 20% subject to adjustment), (c) payment upon performance (to provide the incentive to produce), (d) payment based on TOD (to provide the incentive to provide the product when needed), (e) an update to a portion of the price (to align with the market), (f) an update to TOD factors periodically (to align TOD factors with current market needs in order to give the seller an incentive to shift production, if possible, to the times the electricity is needed), and (g) revenue certainty for the majority (80%) of the payment (perhaps a benefit to the project) while aligning a portion (20%) of the total payment with the current "market" (a potential benefit to the project if the project has variable costs that vary with

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market conditions, and a potential benefit to ratepayers so the total payment does not get too far out of alignment with market realities).

Please comment.

13. Other examples

Please provide other reasonable examples and explain whether or not the Commission should consider or adopt elements of those examples.

Finally, please address:

14. Based on a consideration of the range of stakeholder interests, various candidate price components and examples, please state the specific price structure (rate design), if any, you recommend be adopted by the Commission.

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GOALS FOR FIT PRICE STRUCTURE

The goals for a feed-in tariff price structure are:

1. Be open to all RPS-eligible technologies (technology neutrality) to the extent that is consistent with the state's climate change goals and RPS deadlines
2. Provide sufficient payment to simulate untapped market segments at the distribution level and build new projects while minimizing ratepayer costs and preserving competition.
3. Focus on projects of a certain size that can effectively mitigate the market and regulatory constraints (such as site control and permitting) that slow down development of larger renewable projects.
4. Minimize the transaction costs for the seller, buyer, and the regulator.
5. Maximize transparency while protecting commercially sensitive information and the public interest.
6. Equitably allocate risk, relative to project size, between the buyer and the seller.
7. Adopt program design elements and a contract that adequately address project viability.
8. Facilitate interconnection of projects that efficiently utilize the existing distribution system.
9. Complement, but not impede or duplicate, existing programs, especially the California Solar Initiative and the existing Renewable Portfolio Standard programs, which are both aimed at facilitating the state's energy policy and climate change goals.
10. Provide sufficient regulatory certainty to create a sustainable marketplace for small distributed generation renewable developers.
11. Just and reasonable rates for the buyer, seller, ratepayer, and society.

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12. Simplicity.
13. Economic efficiency.
14. Promote performance.
15. Align performance with demand.

(END OF ATTACHMENT C)

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PRICING GOALS ASSESSMENT

See description below of pricing-related goals and pricing options;
Parties should add rows and columns as necessary, or may use another
approach if it improves the presentation of the information

PRICING-RELATED GOAL	PRICING APPROACHES						
	A	B	C	D	E	F	G
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PRICING-RELATED GOALS

PRICING- RELATED GOAL	DESCRIPTION (Same as listed in Attachment C)
1	Be open to all RPS-eligible technologies, technology neutrality, to the extent that is consistent with the state's climate change goals and RPS deadlines
2	Provide sufficient payment to simulate untapped market segments at the distribution level and build new projects while minimizing ratepayer costs and preserving competition.
3	Focus on projects of a certain size that can effectively mitigate the market and regulatory constraints (such as site control and permitting) that slow down development of larger renewable projects.
4	Minimize the transaction costs for the seller, buyer, and the regulator.
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11	Just and reasonable rates for the buyer, seller, ratepayer, and society.

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12	Simplicity.
13	Economic efficiency.
14	Promote performance.
15	Align performance with demand.
16	Other (specify)
17	Other (specify)
18	Other (specify)
19	Other (specify)
20	Other (specify)

PRICING APPROACHES:

PRICING APPROACHES	DESCRIPTION
A	Seller's cost
B	Seller's cost plus or minus an adjustment
C	Buyer's avoided cost
D	Buyer's avoided cost plus or minus an adjustment
E	Market - Auction
F	Market - Bi-lateral negotiation
G	Other (Specify)

(END OF ATTACHMENT D)

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PRICE COMPONENTS ASSESSMENT

See description below of pricing-related goals and price components
Parties should add rows and columns as necessary, or may use another
approach if it improves the presentation of the information

PRICING-RELATED GOAL	PRICING COMPONENTS						
	A	B	C	D	E	F	G
1							
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PRICING-RELATED GOALS

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3	Focus on projects of a certain size that can effectively mitigate the market and regulatory constraints (such as site control and permitting) that slow down development of larger renewable projects.
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9	Complement, but not impede or duplicate, existing programs, especially the California Solar Initiative and the existing Renewable Portfolio Standard programs, which are both aimed at facilitating the state's energy policy and climate change goals.
10	Provide sufficient regulatory certainty to create a sustainable marketplace for small distributed generation renewable developers.
11	Just and reasonable rates for the buyer, seller, ratepayer, and society.
12	Simplicity.

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13	Economic efficiency.
14	Promote performance.
15	Align performance with demand.
16	Other (specify)
17	Other (specify)
18	Other (specify)
19	Other (specify)
20	Other (specify)

PRICE COMPONENTS

PRICE COMPONENTS	DESCRIPTION
A	Energy rate (cents/kWh)
B	Demand rate (dollars/kW)
C	Fixed payment (dollars/customer)
D	Adjustments (e.g., tied to an index)
E	Other (specify)
F	Other (specify)
G	Other (specify)

(END OF ATTACHMENT E)