Maryland Offshore Wind Technical Conference

Process Overview, Application Checklist, and OREC Bid Forms

presented by

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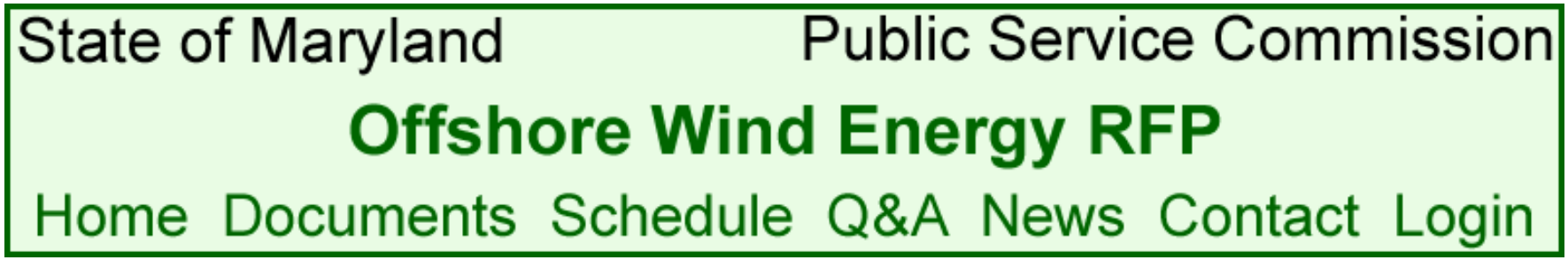
LEVITAN & ASSOCIATES, INC.

MARKET DESIGN, ECONOMICS AND POWER SYSTEMS

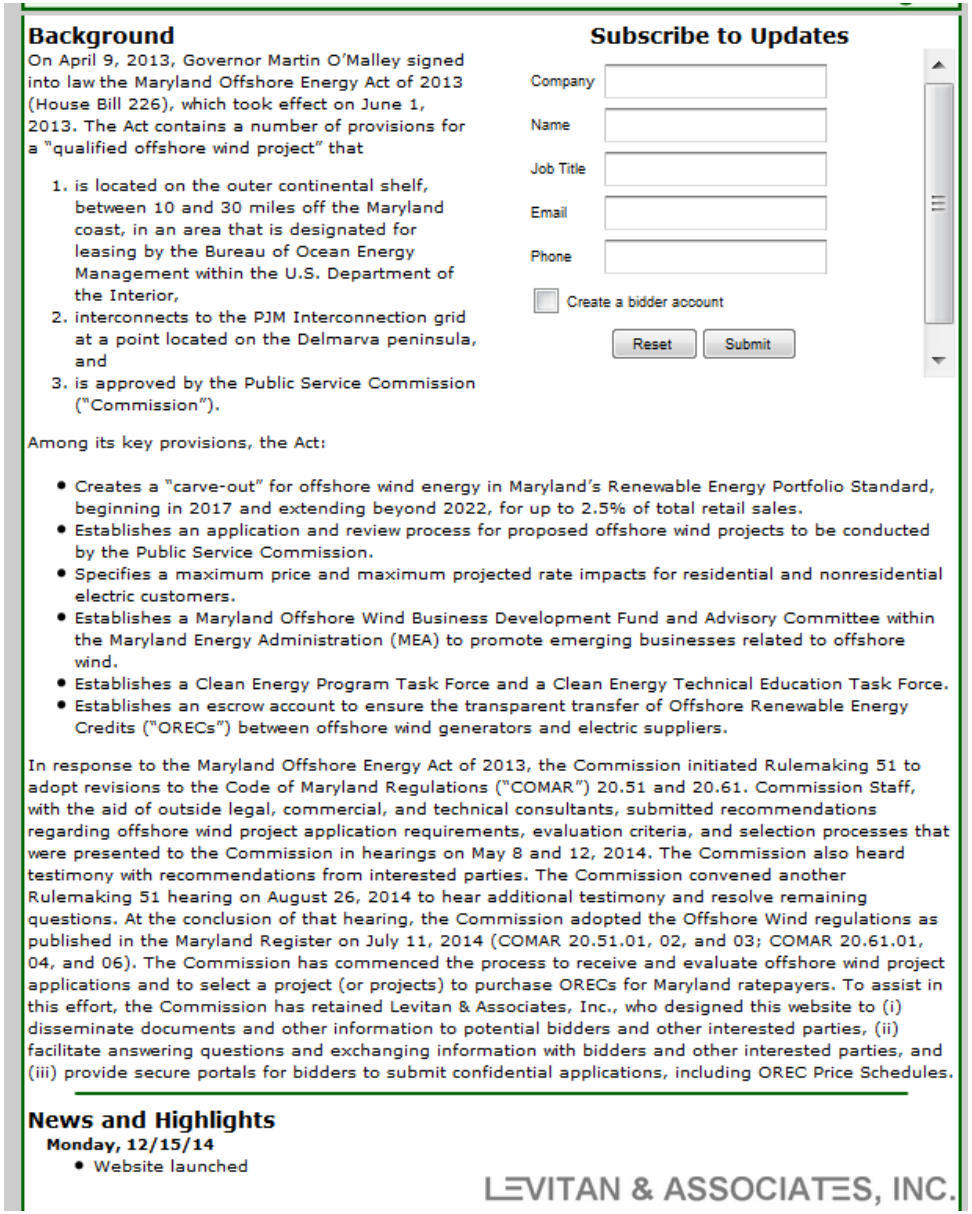
Overview

- Introductions
- Website Review
- Process Overview
- Application Checklist
- One- and Two-Part OREC Price Bid Forms

Website Review



Website Review: Home



Background

On April 9, 2013, Governor Martin O'Malley signed into law the Maryland Offshore Energy Act of 2013 (House Bill 226), which took effect on June 1, 2013. The Act contains a number of provisions for a "qualified offshore wind project" that

1. is located on the outer continental shelf, between 10 and 30 miles off the Maryland coast, in an area that is designated for leasing by the Bureau of Ocean Energy Management within the U.S. Department of the Interior,
2. interconnects to the PJM Interconnection grid at a point located on the Delmarva peninsula, and
3. is approved by the Public Service Commission ("Commission").

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Among its key provisions, the Act:

- Creates a "carve-out" for offshore wind energy in Maryland's Renewable Energy Portfolio Standard, beginning in 2017 and extending beyond 2022, for up to 2.5% of total retail sales.
- Establishes an application and review process for proposed offshore wind projects to be conducted by the Public Service Commission.
- Specifies a maximum price and maximum projected rate impacts for residential and nonresidential electric customers.
- Establishes a Maryland Offshore Wind Business Development Fund and Advisory Committee within the Maryland Energy Administration (MEA) to promote emerging businesses related to offshore wind.
- Establishes a Clean Energy Program Task Force and a Clean Energy Technical Education Task Force.
- Establishes an escrow account to ensure the transparent transfer of Offshore Renewable Energy Credits ("ORECs") between offshore wind generators and electric suppliers.

In response to the Maryland Offshore Energy Act of 2013, the Commission initiated Rulemaking 51 to adopt revisions to the Code of Maryland Regulations ("COMAR") 20.51 and 20.61. Commission Staff, with the aid of outside legal, commercial, and technical consultants, submitted recommendations regarding offshore wind project application requirements, evaluation criteria, and selection processes that were presented to the Commission in hearings on May 8 and 12, 2014. The Commission also heard testimony with recommendations from interested parties. The Commission convened another Rulemaking 51 hearing on August 26, 2014 to hear additional testimony and resolve remaining questions. At the conclusion of that hearing, the Commission adopted the Offshore Wind regulations as published in the Maryland Register on July 11, 2014 (COMAR 20.51.01, 02, and 03; COMAR 20.61.01, 04, and 06). The Commission has commenced the process to receive and evaluate offshore wind project applications and to select a project (or projects) to purchase ORECs for Maryland ratepayers. To assist in this effort, the Commission has retained Levitan & Associates, Inc., who designed this website to (i) disseminate documents and other information to potential bidders and other interested parties, (ii) facilitate answering questions and exchanging information with bidders and other interested parties, and (iii) provide secure portals for bidders to submit confidential applications, including OREC Price Schedules.

News and Highlights

Monday, 12/15/14

- Website launched

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Website Review: Documents

Documents

Code of Maryland Regulations

- Maryland Offshore Wind Energy Act of 2013 (PDF)
- Link to Code of Maryland Regulations, Subtitle 51: Electricity Suppliers
- Link to Code of Maryland Regulations, Subtitle 61: Renewable Energy Portfolio Standard Program

Bureau of Ocean Energy Management

- Bureau of Ocean Energy Management Website
- Federal Register Notice (PDF)
- Maryland Leasing Areas Map (PDF)
- Maryland Leasing Areas Map Nautical Chart (PDF)

Offshore Wind Regulations

- Proposed Maryland Offshore Wind Regulations Cover Letter (PDF)
- Proposed Maryland Offshore Wind Regulations (PDF)
- Proposed Maryland Offshore Wind Regulations with Staff Recommendations (PDF)
- Recommended Criteria and Process for the Evaluation and Selection of Offshore Wind Applications (PDF)

Background Materials

Disclaimer: These documents are being provided for information purposes only and do not constitute a complete list of available resources. Neither the MD PSC nor Levitan & Associates, Inc. warrants their accuracy or recommends their utilization by bidders.

- MEA Geophysical Survey Press Release (PDF)
- MEA Geophysical Survey Report (PDF)

Technical Conference Materials

- Notice of Technical Conference (PDF)
- OREC 2-Part Bid Price Form Instructions (PDF)
- Preliminary 2-Part Bid Price Form (XLSX)

Application Materials

- Application Checklist (PDF)
- OREC 1-Part Bid Price Form Instructions (PDF)
- 1-Part Bid Price Form (XLSX)

Website Review: Schedule

Schedule

Milestone	Date
Project Website Launch	December 15, 2014
Earliest Possible Application Submittal	December 15, 2014
Technical Conference	January 8, 2015
Administrative Completeness Determination	30 days from application submittal
Application Period – Starting Date	The date the first application is found to be administratively complete
Application Period – Ending Date	180 days from the Application Period Starting Date
Application Decision (Approve, Conditionally Approve, or Deny)	Within 180 days after the Application Period Ending Date, unless extended by mutual consent of the parties

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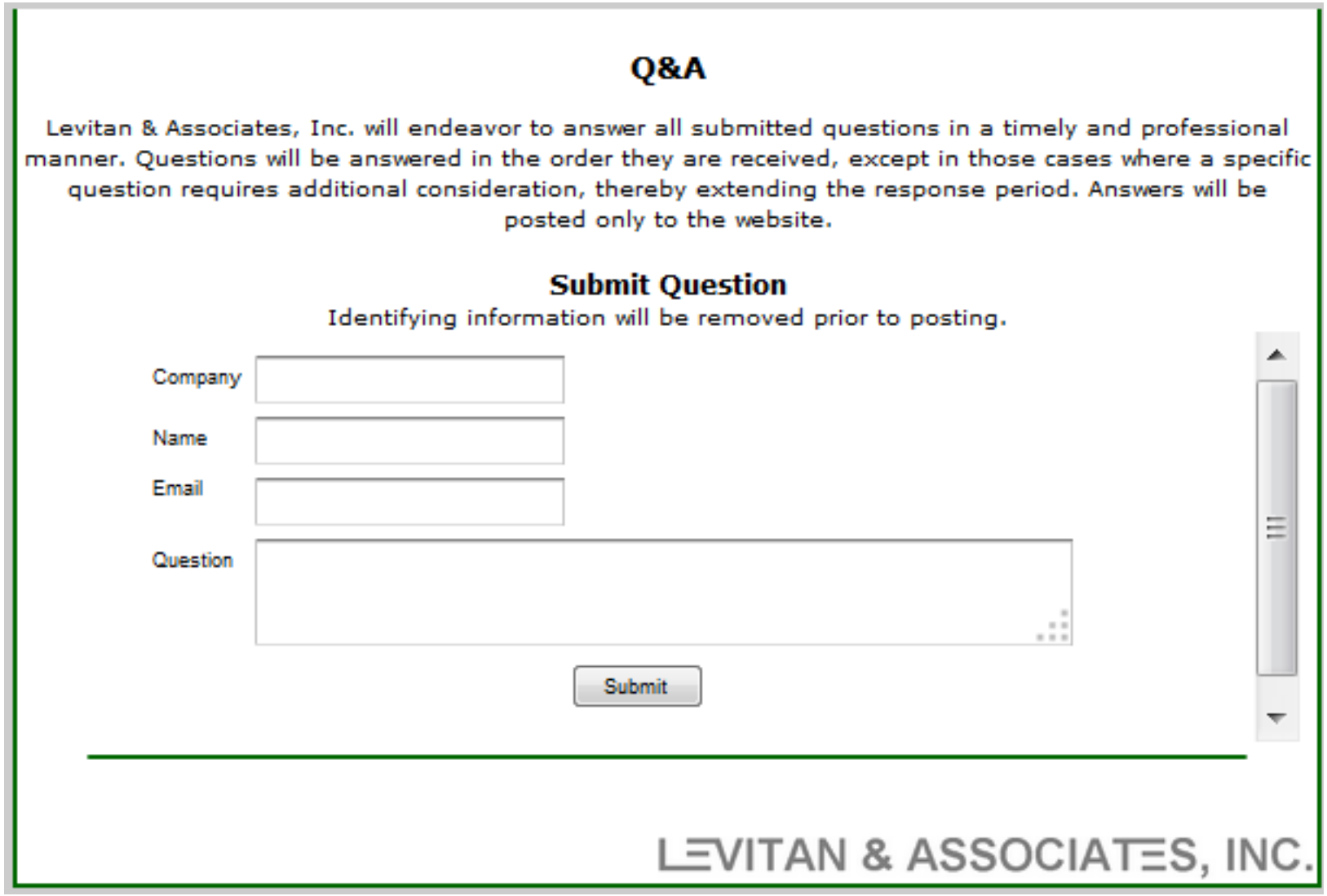
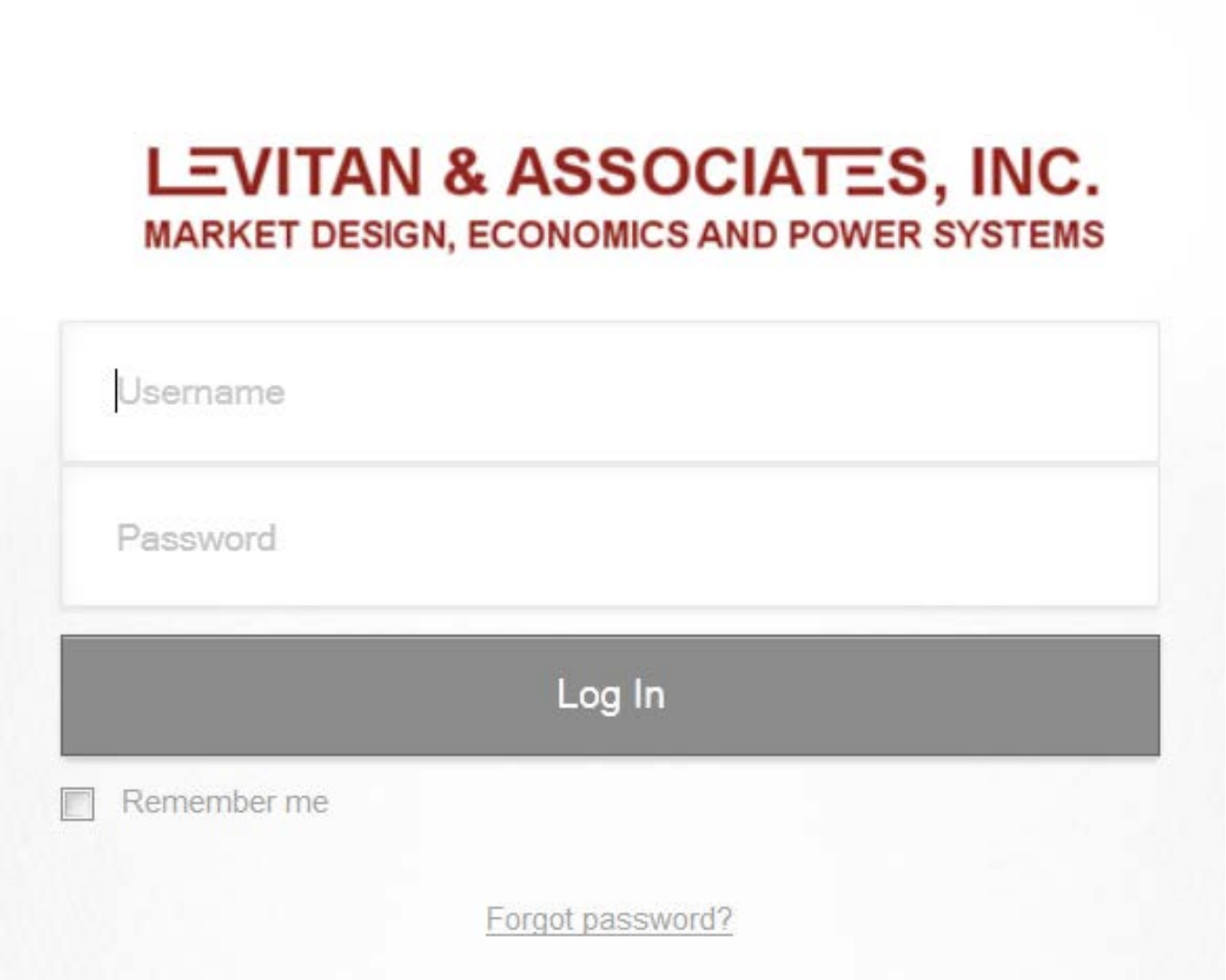
Website Review: Q&A



Website Review: News

Website Review: Contact

Website Review: Login



Process Overview

- Application Review
  - Administrative completeness
  - Minimum threshold requirements
  - Quantitative review (OREC Price Bid Form)
  - Qualitative review

- Commission Determination
  - Ratepayer impact
  - In-state economic impact
  - Environmental impact
  - Other factors

Application Checklist: 1 Applicant Information

1-1 A signed and notarized statement by an officer of the OSW applicant binding the application until the expiration date and ensuring accuracy of application materials and completion of the project by COD

1-2 An organizational chart

1-3 Legal name and type of business organization of each entity listed including certificates of formation and certificates of good standing

1-4 Bylaws or operating agreements of each entity listed on the organizational chart and relevant board resolution (or equivalent written consent) to submit an application

Application Checklist: 1 Applicant Information

1-5 Name, title, address, telephone number, email address, and curriculum vitae of each member of the OSW applicant's executive team and project team

1-6 Complete information for each entity providing financing to the proposed project including most recent audited financial statements and debt ratings

1-7 Complete information for each subcontractor working on the proposed project

1-8 Complete information about business bankruptcies, defaults, disbarments, investigations, indictments, against the OSW applicant or any subcontractor

1-9 Complete information about previous similar work performed by contractor or subcontractor

Application Checklist: 2 Project Information

2-1 General description of the proposed offshore wind project

2-2 General maps showing turbine layout, landfall and grid interconnection points, and construction layout site

2-3 Wind resource and energy yield report with expected gross and net (at PJM billing meter) annual energy production accounting for losses

2-4 Wind turbine technology with turbine manufacturer and complete model specifications

2-5 Foundation and support-structure descriptions

2-6 Description of the electrical collection system and connection to the transmission grid including the status of PJM interconnection request

2-7 Site-control status and plan to acquire and ensure site control for the operating term, interconnection and right-of-way status (or plans), and status of discussions with BOEM

Application Checklist: 2 Project Information

2-8 General description of balance of plant components

2-9 Procurement and construction plan with milestones

2-10 Operations and maintenance plan

2-11 Permitting and approvals plan with a detailed matrix listing all required federal, state, and local environmental and regulatory permits and approvals and current status

2-12 Decommissioning plan

2-13 Project COD and a proposed timeline for the proposed offshore wind project's development and critical path schedule

2-14 Whether the proposed project's nameplate capacity is larger than required to provide the aggregate proposed OREC amount for the term of the proposed OREC price schedule and a methodology for reasonably allocating the transmission upgrade costs to be included in the OREC price

Application Checklist: 3 Commercial Information

3-1 Plan for engaging small businesses

3-2 Plan for compliance with the Minority Business Enterprise Program for the construction, manufacturing, and maintenance phases of the proposed offshore wind project

3-3 Plan for the use of skilled labor

3-4 Compensation plan for employees and subcontractors consistent with wages outlined in State Finance and Procurement Article, Title 17, Subtitle 2, Annotated Code of Maryland

Application Checklist: 4 Financial Information

4-1 Detailed financial analysis of the proposed project, including a pro forma income statement, balance sheet and cash flow projection, estimated benefits of any State or federal grants, rebates, tax credits, loan guarantees and estimated internal rate of return and return on equity

4-2 Project balance sheet at project COD with all capital expenditures broken down by major cost category

4-3 Proposed capital structure identifying equity investors, sources of debt, any other sources of capital, and written demonstration of equity and debt funding commitments

4-4 Year-by-year spending projections of expenses and capital expenditures by five- or six-digit NAICS code extending through the term of the proposed OREC price

Application Checklist: 4 Financial Information

4-5 Detailed matrix demonstrating that the OSW applicant has applied for all current eligible State and federal grants, rebates, tax credits, loan guarantees

4-6 Affirmative statement of commitment to use best efforts to apply for all eligible State and federal grants, rebates, tax credits, loan guarantees, and other similar benefits and to agree to pass along to retail electric customers 80 percent of the value of any such benefits

4-7 Affirmative statement to execute a memorandum of understanding with the Commission that requires the OSW applicant to make serious, good-faith efforts to interview minority investors in any future attempt to raise venture capital or attract new investors to the qualified offshore wind project

4-8 Affirmative statement of commitment to deposit $6,000,000 into the Maryland Offshore Wind Business Development Fund

Application Checklist: 4 Financial Information

4-9 Affirmative statement by the OSW applicant that it will hold harmless the retail electric customers, OREC purchasers, and the State for any cost overruns associated with the proposed offshore wind project

4-10 Affirmative statement that the OSW applicant will use commercially reasonable efforts to sell its electricity service attributes to the PJM markets

4-11 OREC price schedule (either two-part or one-part OREC price)

4-12 Proposed OREC amount expressed as a single annual number on a megawatt hour per calendar year basis and fixed for the proposed

Application Checklist: 5 Cost-Benefit Analysis

5-1 Input-output analysis describing the in-state impact on income, employment, wages, and state and local taxes

5-2 Analysis describing expected employment impacts in the State

5-3 Analysis describing the in-state business impacts of the proposed offshore wind project

5-4 Analysis describing anticipated environmental and health impacts including direct emissions impacts created by the proposed offshore wind project related to carbon dioxide, oxides of nitrogen, sulfur dioxide, particulates and mercury emissions

5-5 Analysis of any other impacts on residential, commercial, and industrial retail electric customers

5-6 Analysis of the effect of the proposed project on wholesale energy, capacity, and ancillary services markets administered by PJM

Application Checklist: 6 Add'l / Misc. Information

- Any information that may be important for the Commission's determination and falls outside of other categories
- Any information that distinguishes a project and/or its sponsors from other projects

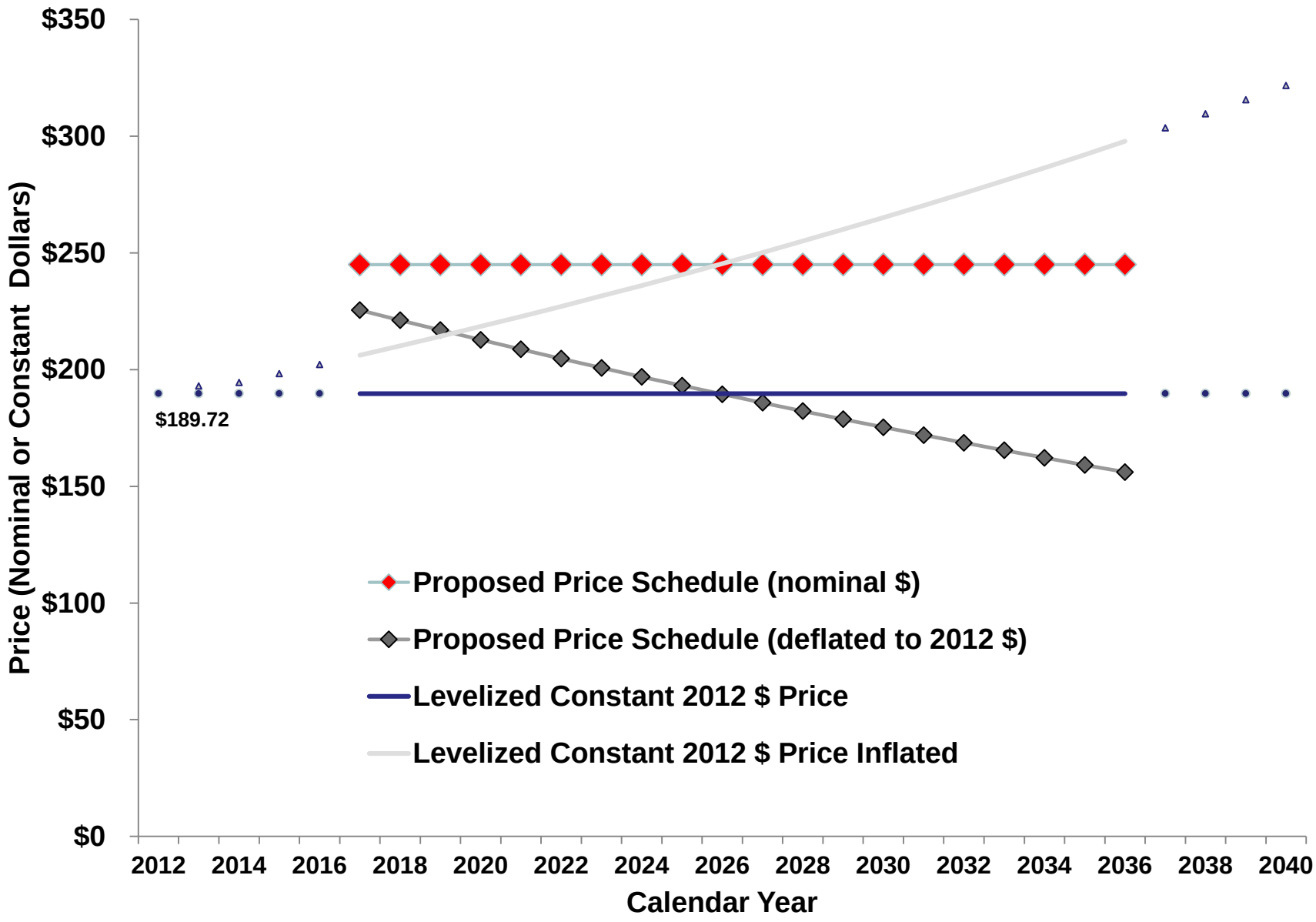
OREC Price Bid Form

- One-Part Price Bid
  - Bid price includes all project costs *including* PJM upgrades
  - Developer takes risk of PJM upgrade costs

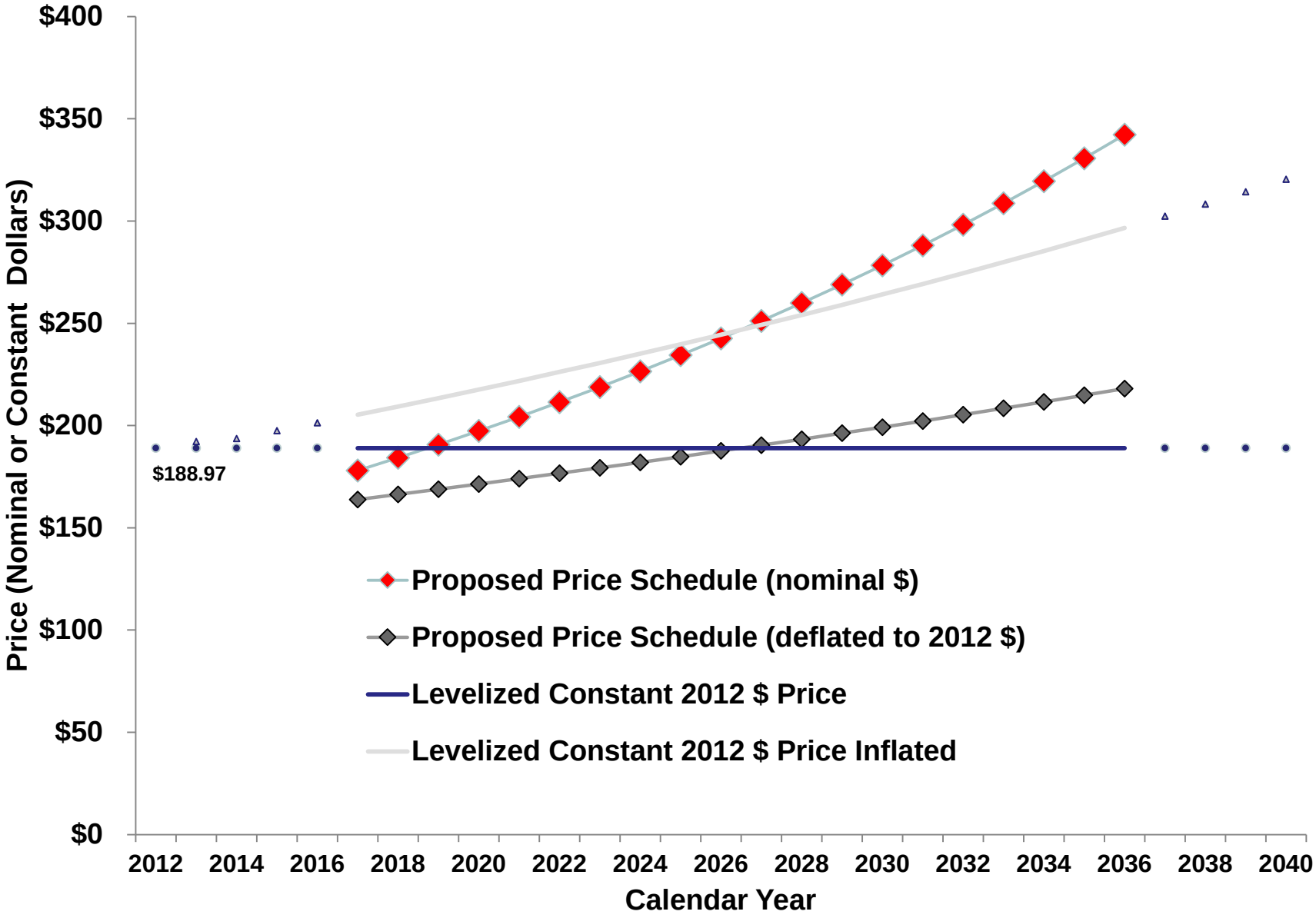
- Two-Part Price Bid
  - First part: all project costs *except* PJM transmission upgrades
  - Second part: Commission estimate of upgrades costs
  - True-up based on Interconnection Service Agreement *subject to* price and rate caps

- Electronic OREC Price Bid Forms
  - Historical inflation (GDPIPD) Q2 2012 to Q4 2014: 3.02 %
  - Future inflation (LT Composite T-Bond Rate): 1.96 % / yr
  - Real discount rate (yield on LT TIPS T-Bonds): 0.78 % / yr

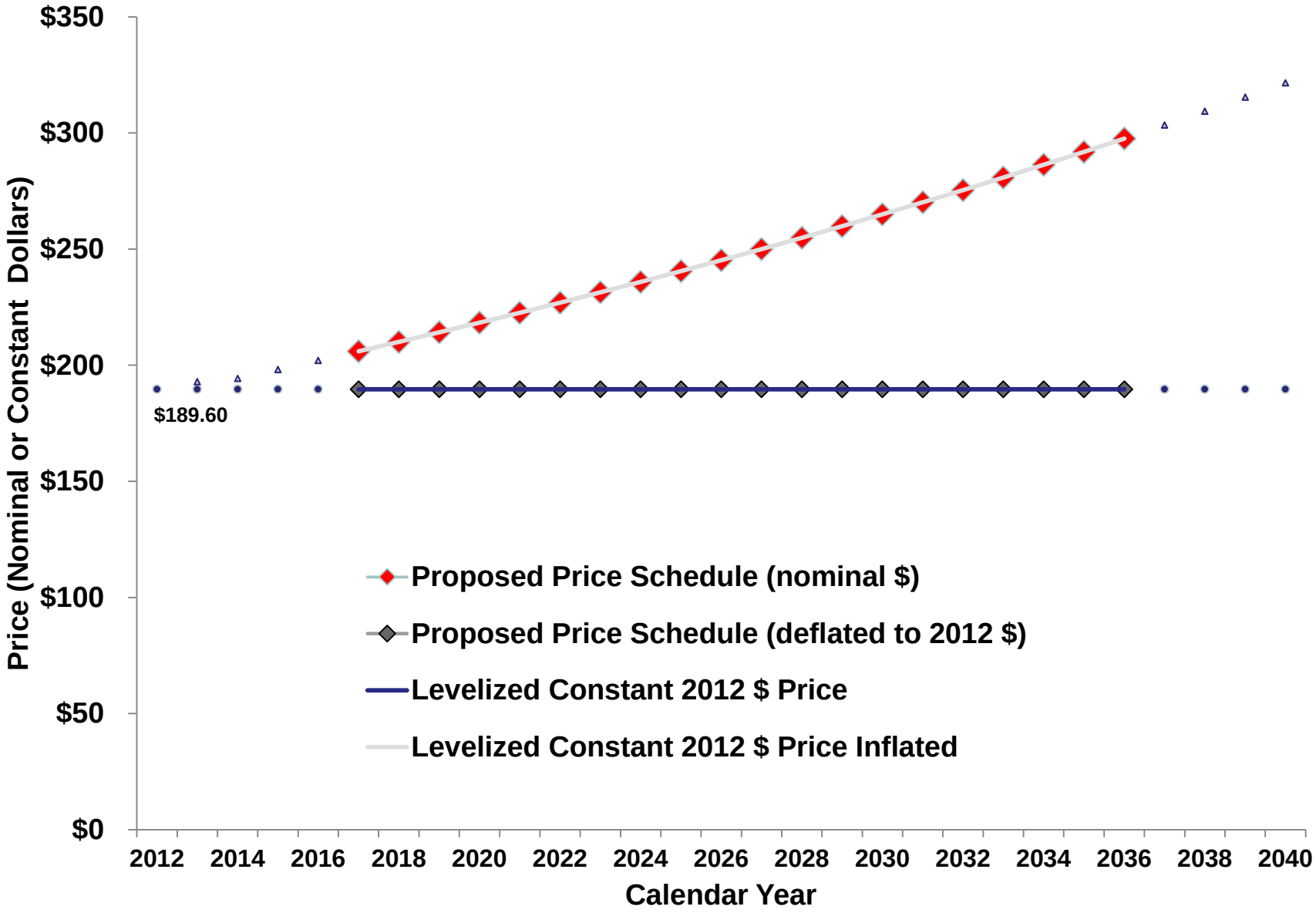
Example A: Flat Nominal $ Price



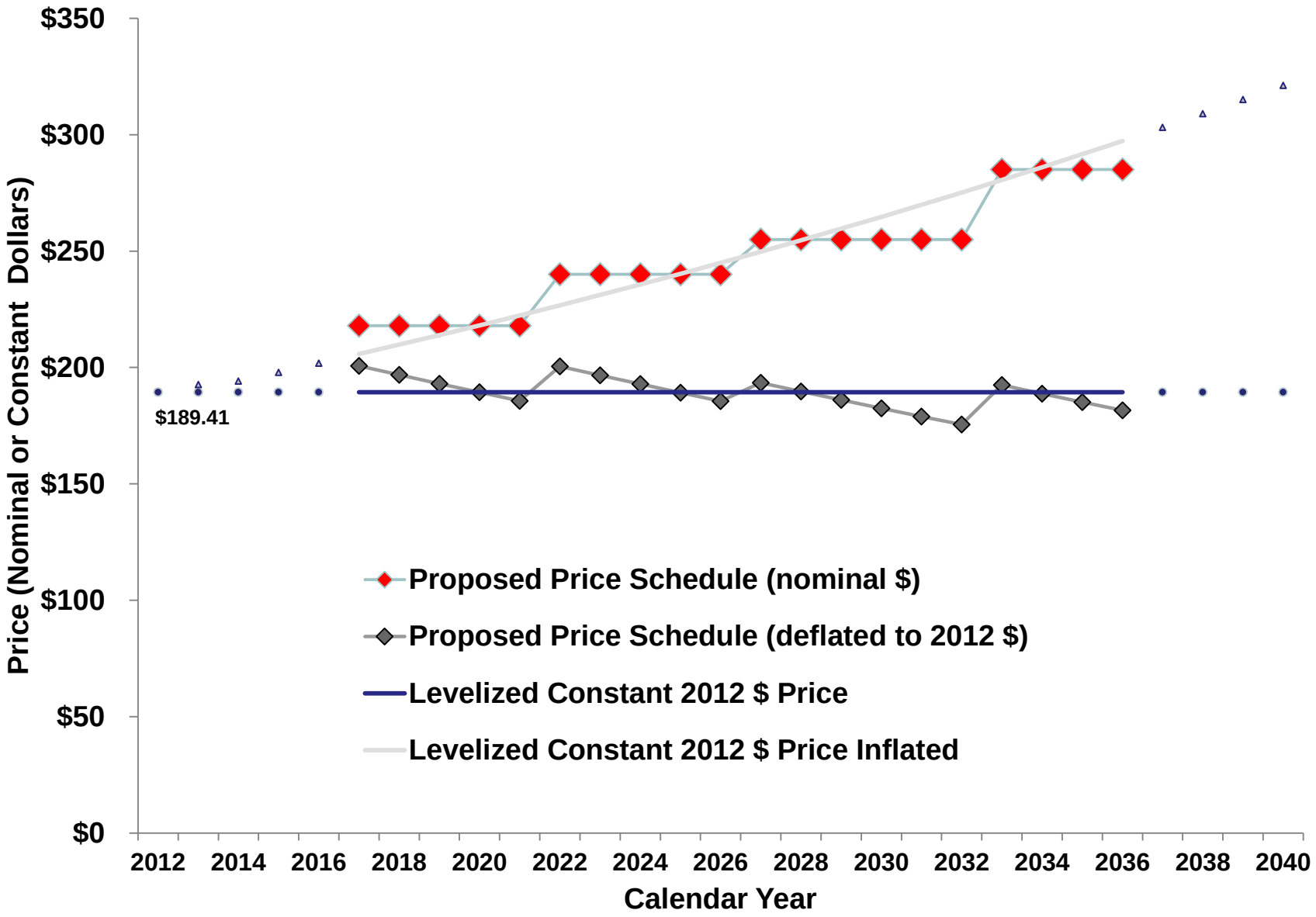
Example B: Nominal $ Price Escalating at 3.5%



Example C: Nominal $ Price Escalating at 1.96%



Example D: Nominal $ Price With Steps



Commission Selection Based on Four Results

- Impact on Ratepayers
  - Net ratepayer costs
- In-State Economic Benefits
  - Jobs, taxes, and local spending
- Environmental Benefits
  - Avoided emissions (tons)
  - Marine / terrestrial benefits
- Other Qualitative Factors
  - Project strengths / weaknesses
  - Commitments re small businesses, minority investors, skilled labor, etc.

A selected project must "…demonstrate positive net economic, environmental, and health benefits to the State…"

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- Questions and Answers

Thank you!