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IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

**IN THE MATTER OF THE COMMISSION'S)
REVIEW OF PURPA QF CONTRACT)
PROVISIONS INCLUDING THE)
SURROGATE AVOIDED RESOURCE (SAR))
AND INTEGRATED RESOURCE PLANNING)
(IRP) METHODOLOGIES FOR)
CALCULATING PUBLISHED AVOIDED)
COST RATES.)**

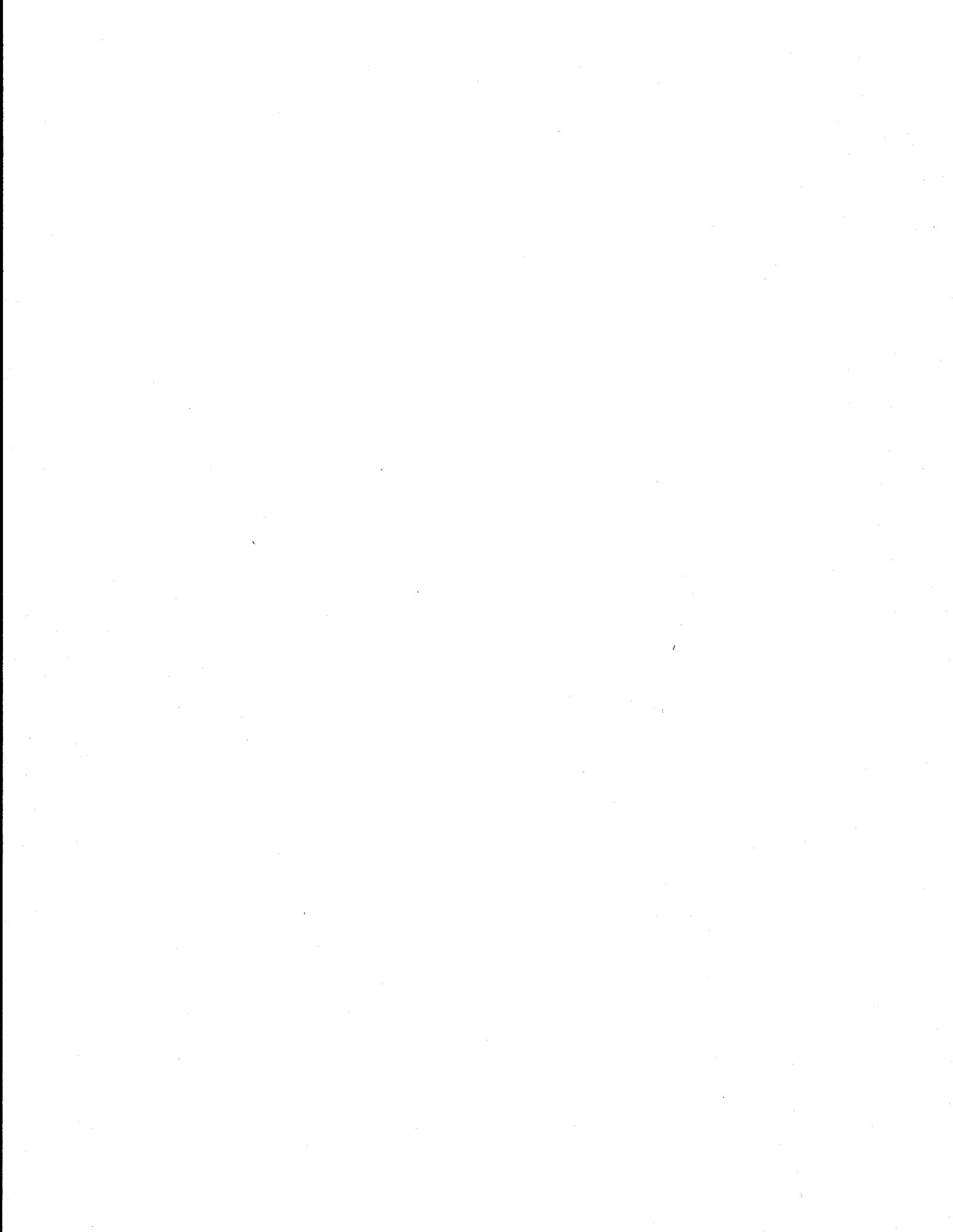
CASE NO. GNR-E-11-03

ENERGY INTEGRITY PROJECT

DIRECT TESTIMONY

OF

THOMAS TANTON



1 **INTRODUCTION**

2 Q. Please state your name and business address.

3 A. My name is Thomas Tanton and my business address is 4390 Indian Creek
4 Road, Lincoln, California 95648.

5 Q. By whom are you employed and in what capacity?

6 A. I am President of T² & Associates, a firm located in Lincoln, California,
7 which provides consulting services to the energy and technology industries.

8 Q. Please describe your educational background and work experience.

9 A. T² & Associates are active primarily in the area of renewable energy and
10 interconnected infrastructures, analyzing and providing advice on their impacts on energy
11 prices, environmental quality and regional economic development. I have 38 years direct
12 and responsible experience in energy technology assessment, resource planning, electric
13 grid integration and infrastructure development.

14 As the General Manager at the Electric Power Research Institute (EPRI),
15 from 2000 to 2003, I was responsible for the overall management and direction of
16 collaborative research and development programs in renewable and hydroelectric
17 generation technologies, integrating technology, market infrastructure, and public policy.
18 From 2003 through 2007, I was Senior Fellow and Vice President of the Houston based
19 Institute for Energy Research. I was also a Senior Fellow in Energy Studies with the
20 Pacific Research Institute until 2010. Until 2000, I was the Principal Policy Advisor with
21 the California Energy Commission (CEC) in Sacramento, California. I began my career
22 there in 1976. I developed and implemented policies and legislation on energy and
23 environmental issues of importance to California, and U.S. and International markets,

1 including electric restructuring, gasoline and natural gas supply and pricing, energy
2 facility siting and permitting, environmental issues, power plant siting, technology
3 development, and transportation. I completed the first assessment of environmental
4 externalities used in regulatory settings, placing a monetary value on environmental
5 pollutant emissions. I held primary responsibility for resource planning, comparative
6 economic analysis, environmental assessment of new technologies, and the evaluation of
7 alternatives under state and federal environmental law. I served as Guest Lecturer for the
8 Master in Environmental Science program at California State University Sacramento
9 (CSUS), lecturing on power plant and electric grid technologies and their comparative
10 environmental impacts.

11 In my role as Principal Policy Advisor at the California Energy Commission, I
12 evaluated power plant applications for certification, including environmental, economic
13 and reliability considerations.

14 I have extensive experience with electricity resource planning and resource
15 integration, including use of dispatch modeling to evaluate impacts on customer price and
16 grid reliability from the addition of specific or generic resources to a grid.

17 My curriculum vitae is provided as Exhibit No. 2001 hereto and incorporated by
18 reference herein.

19 Q. What is the purpose of your testimony in this matter?

20 A. I have been asked by Energy Integrity Project to give recommendations
21 relevant to the Idaho Public Utilities Commission's ("Commission") current review of
22 the methodology for computing avoided costs in PURPA implementation.

1 **I. Recommendations**

2 Q. Could you please state your recommendations?

3 A. I appreciate the PUC's efforts to adopt improved methods for determining
4 the avoided costs delivered by Qualifying Facilities. After reviewing current and
5 proposed methodologies for determining the energy component of the IRP avoided
6 cost, I believe that a significant component has been overlooked. The overlooked
7 component is that the integration of QF generation into the electric system is not
8 perfectly efficient. For a variety of reasons, the quantity of fossil fuel saved by each
9 MWh of QF generation is likely to be less than the quantity of fossil fuel that would
10 have been required to replace that MWh by the next marginal increment of non-QF
11 generation.

12 I recommend that the PUC change the IRP avoided cost calculation by
13 taking the actual fuel savings achieved by each QF into account. I believe the actual
14 fuel savings could be calculated by re-running the chronological dispatch for the
15 contract year with and without the QF, and taking the difference in total fuel
16 consumption. Other State's Commissions have used this method in the past and more
17 accurately accounts for the value of capacity and of energy.

18 Side-by-side chronological dispatch should be benchmarked with actual
19 recent (from the past year) recorded performance of generators on the grid and actual
20 recent recorded loads and load profiles. Such comparisons should be done for each
21 contract year, or small combination of years, and for each QF connecting to the grid.
22 Alternatively, small groupings of QFs, depending on their aggregate capacity and
23 energy, could reduce computational requirements.

1 Q. Does this complete your testimony at this time?

2 A. Yes, it does.

**BEFORE THE
IDAHO PUBLIC UTILITIES COMMISSION**

CASE NO. GNR-E-11-03

ENERGY INTEGRITY PROJECT

TANTON, DI

TESTIMONY

EXHIBIT NO. 2001

Curriculum Vitae

Thomas Tanton

Mr. Tanton is President of T² & Associates, a firm providing consulting services to the energy and technology industries. T² & Associates are active primarily in the area of renewable energy and interconnected infrastructures, analyzing and providing advice on their impacts on energy prices, environmental quality and regional economic development. Mr. Tanton has 38 years direct and responsible experience in energy technology and legislative interface, having been central to many of the critical legislative changes that enable technology choice and economic development at the state and federal level. Mr. Tanton is a strong proponent of free market environmentalism and consumer choice, and frequently publishes and speaks against alarmist and reactionary policies and government failures.

As the General Manager at EPRI, from 2000 to 2003, Mr. Tanton was responsible for the overall management and direction of collaborative research and development programs in electric generation technologies, integrating technology, market infrastructure, and public policy. A key focus of this work was the integration of intermittent wind with electric grids. He has previously served as a Senior Environmental Fellow with the Pacific Research Institute and Vice President and Adjunct scholar with the Institute for Energy Research.

Mr. Tanton has over 38 years experience in the energy, economy, and environmental fields. Until 2000, Mr. Tanton was the Principal Policy Advisor with the California Energy Commission (CEC) in Sacramento, California. He began his career there in 1976. He developed and implemented policies and legislation on energy issues of importance to California, and U.S. and International markets, including electric restructuring, gasoline and natural gas supply and pricing, energy facility siting and permitting, environmental issues, power plant siting, technology development, and transportation. He initiated legislative authorization for the Public Interest Energy Research program and managed the program's research in infrastructure, renewables and environmental areas. Mr. Tanton completed the first assessment of environmental externalities used in regulatory settings. Mr. Tanton held primary responsibility for comparative economic analysis, environmental assessment of new technologies, and the evaluation of alternatives under state and federal environmental law. Mr. Tanton served as Guest Lecturer for the Master in Environmental Science program at CSUS, lecturing on power plant and electric grid technologies and their comparative environmental impacts.

Mr. Tanton has been recognized for raising awareness of the connection of electricity to other important industries including agriculture, petroleum production, electronics,

biotechnology, water supply, Internet, and finance. Mr. Tanton served as a team member of California Governor's Office task force on critical infrastructure security, coordinating with national effort lead by White House Office of Science and Technology Policy. He served as lead advisor on energy and infrastructure to California's task force on 21st Century development (and provided unique leadership relative to California's electric transmission needs), recommended positions and actions on major items before the California Energy and Public Utilities Commissions, and provided representation with external top-level management Boards, Commissions, Legislature and Congress. He has testified before several State legislatures and Congress, and provided expert witness testimony in power plant siting cases.

Significant Past Affiliations

- West Coast Region-Petroleum Technology Transfer Center (PTTC)-(University of Southern California)
- Senior Research Associate—Urban Utility Center; New York Polytechnic Institute
- US Combined Heat and Power Association—Co-Chair Pacific Southwest Region Initiative
- National Fuel Cell Research Center—University of California, Irvine—Technical Advisory Committee
- Complex Interactive Network/Systems Initiative (a Major Collaborative Project led by U.S. Department of Defense re: cyber and network infrastructure security)—Technical and Policy Advisory Committees

Recent Publications

Natural Gas Demand Impacts from Expanded Use of Renewables in Electricity Generation Thomas Tanton, July 2010

An Estimate of the Economic Impact of A Cap and Trade Auction Tax On California,
Thomas Tanton, March, 2010, Testimony to California Air Resources Board

American Petroleum Institute, *Emission Reductions Associated with U.S. Oil and Gas Industry Investments in Greenhouse Gas Mitigation Technologies* Thomas Tanton March 2010

Tanton, Thomas, et.al. *Oil and Gas Industry Investments in Alternative Energy, Frontier Hydrocarbons and Advanced End-Use Technologies; May 2006*

Robert L. Bradley Jr. and Thomas Tanton; *Motor Fuel and Natural Disasters: Don't Regulate* in Energy, Environment, and Economics: A guide for State Legislators, American Legislative Exchange Council, June 2006

American Petroleum Institute, *Key Investments in Greenhouse Gas Mitigation Technologies by Energy Firms, Other Industry and the Federal Government: An Update*; Thomas Tanton with Center for Energy Economics, Bureau of Economic Geology, The University of Texas, June 2009

American Petroleum Institute, *Key Investments in Greenhouse Gas Mitigation Technologies by Energy Firms, Other Industry and the Federal Government*, April 2008

American Petroleum Institute, *Oil and Gas Industry Investments In Alternative Energy, Frontier Hydrocarbons and Advanced End-Use Technologies: An Update* Thomas Tanton with Center for Energy Economics, Bureau of Economic Geology, The University of Texas, September 2008

Thomas Tanton, *How Myths Distort Energy Policy*, Power Magazine February 1, 2010

Tanton, Thomas; *Renewable Portfolio Standards: Achieving Their Goals?* American Coal; ACC; Issue 1, 2006

Tanton, Thomas; *The New Future of Renewable Energy* World and I Magazine; February 2003

California Energy Commission; *Electricity Report 1988, 92, 94, 96, 98*; Project Director and Contributing Author. The Electricity Report is California's official electricity planning and regulatory proceeding, integrating demand forecast, resource planning, environmental and economic analysis and comparison of technologies, forming the basis for approval of any power plant proposed for construction in the State.

California Energy Commission; *Biennial Report 1992, 1995*, Advisor and Contributing Author; The Biennial Report is California's official energy Policy Report, integrating analysis of electricity, transportation, conservation and technology R&D markets, trends and opportunities.

Technical Assessment Manual, Volume 1, Editions 1-3. 1980, 1983, 1988 Data base of economic, environmental and performance characteristics of generation, power delivery and conservation technologies.

California Energy Commission, *Energy Development Report 1994*

Thomas Tanton, Mark Thayer, et.al. *Air Quality Valuation Model*; 1994. The air quality valuation model is a regulatorily accepted model to determine economic values for various air pollution emissions (restricted to California) based on damage function analysis: this publication also included submitted testimony.

Thomas Tanton; *Vessel Traffic Safety Analysis of the Point Conception Liquefied Natural Gas Facility* 1978

Tanton, Thomas, *Analysis of Alternatives to the (proposed) Montezuma Coal Fired Power Plant* (Testimony submitted in compliance with California Environmental Quality Act) 1983

Tanton, Thomas, and Prabunam Singh Khalsa, *Analysis of Alternatives to the (proposed) "Cal-Coal" Power Plant* (Testimony submitted in compliance with California Environmental Quality Act) 1981

Education

B.S. Chemistry, 1972, California State University, San Diego

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 3rd day of May 2012, I served a true and correct copy of the DIRECT TESTIMONY OF THOMAS TANTON upon the following named parties by the method indicated below:

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