Testimony of Jason Bak
CEO, Finavera Renewables

Before the
Committee on Energy and Natural Resources
United States Senate

Oversight Hearing: Opportunities, Issues, and Implementation of Section 388 of the Energy Policy Act of 2005

June 7, 2007 -- Washington, DC

Mr. Chairman and Members of the Committee, thank you for the privilege of allowing me to testify before you.

I am the CEO of Finavera Renewables. We are an energy company focused solely on development, ownership and operation of renewable energy projects around the world. Although we are developing 1500 megawatts of wind energy in Canada and Ireland, my company is represented here today because we are at the cutting edge of ocean wave energy in the United States through our US subsidiary, Finavera Renewables Ocean Energy.

We have three wave energy projects under development in California, Oregon, and Washington, and we are in discussions about others. These are real projects. US steelworkers are at work today constructing our prototype wave energy buoy, which we are going to install off the coast of Newport, Oregon this summer. Our Makah Bay project is the first, and so far only, wave energy project to apply for a federal operating license. We are leaders in an industry that is already creating jobs and is poised to bring clean electricity, desalination, and, in time, hydrogen fuel to the American economy.

I wish to begin by thanking the Chairman and the members of this Committee who have been champions of renewable energy for many years. I would also like to thank Senator Cantwell, Senator Smith, Senator Wyden, and Senator Murkowski who have provided important leadership for the ocean wave, tidal and current energy industry.

My purpose in testifying today is to describe two problems in existing law that create substantial regulatory risk for the ocean wave energy industry. Each problem is rooted in disagreement over the Federal Energy Regulatory Commission's authority under the Federal Power Act to license ocean wave, tidal, or current energy projects, but they have been brought into focus by disputes over the meaning of Section 388 of the Energy Policy Act.

To begin, there is disagreement on the question whether FERC's hydropower licensing authority is confined to traditional in-river, freshwater hydropower projects or whether it also extends to non-traditional hydropower projects, such as wave, tidal or current energy projects, located in marine areas.

This question first arose in 2001, when Aqua Energy, a company that Finavera acquired last year, proposed the Makah Bay wave energy project. Our position at the time was that FERC's authority did not extend to our project. FERC, NOAA and other parties disagreed.

Aqua Energy ultimately acquiesced to FERC's assertion of jurisdiction and, in fact, we have been extremely pleased with the process and FERC's use of its authority.

The legal issue has been dormant; it has not been litigated or otherwise vigorously tested. It is, nevertheless, a latent uncertainty that presents real regulatory and litigation risk. It is an important enough matter that the legislature of the State of Oregon, which is moving aggressively to promote wave energy development and investment, recently petitioned Congress to address the issue by affirming FERC's authority. I have attached a copy of that petition to my testimony for your consideration.

The second matter of concern arises because the Minerals Management Service of the Department of the Interior has asserted that, while FERC may or may not have authority under the Federal Power Act to license non-traditional hydropower projects located in state jurisdictional ocean areas, it lacks authority over projects located on the federal outer continental shelf ("OCS"). MMS contends that Section 388 of the Energy Policy Act of 2005 gave MMS exclusive authority to regulate wave, tidal, or current energy projects on the OCS. This point of disagreement was created by the particular language of Section 388, which grants MMS broad leasing and other authorities for renewable energy projects on the OCS, but includes "savings" provisions for existing law and agency authorities. MMS's position is, essentially, that FERC had no authority under the Federal Power Act to license projects on the OCS, so no such authority was "saved" by the savings clauses. FERC and others disagree.

This dispute over OCS jurisdiction is a matter of particular concern to the ocean wave energy industry because our technologies are well suited for offshore areas, including the OCS, while tidal and current energy projects are, for the time being at least, likely to be located closer to shore.

To boil it down, the question facing us is whether FERC's Federal Power Act hydropower licensing authority extends offshore and, if it does, whether the authority ends at the boundary of the OCS.

This Committee has jurisdiction over every relevant aspect of the problem.

The Federal Power Act and Section 388 can be read -- and we believe they should be read -- in a way that avoids conflict.

In our view, the proper interpretation of existing law, and the proper resolution of the current disagreement, would place FERC squarely in the lead for the purpose of licensing our projects wherever located. And MMS would have clear authority to convey leases or other proprietary rights on the OCS, just as states have authority to issue leases or other proprietary rights in state waters. FERC should be the principal regulator, and MMS should be the federal landlord. As we see it, the agencies both play very substantial, complementary roles with regard to use of the OCS. Neither agency's mission need be subordinated to that of the other.

We do not mean to oversimplify the relationship; we understand that the boundary dividing the two sets of responsibilities is not absolute. The agencies' respective roles are inextricably intertwined. For example, under the Federal Power Act, the Interior Department (along with other federal agencies, states, tribes, and stakeholders) has substantial rights to

participate in FERC license proceedings and to set conditions for the projects. The agencies must cooperate.

Rather than ask the Committee to approach this issue purely as a matter of statutory interpretation, we urge you also to take into account four key policy concerns and to act to clarify existing law with these policy considerations in mind.

First, the ocean hydropower industry is already heavily invested in the FERC hydropower licensing process. Finavera and other companies have literally built major components of our U.S. business models around the substantive and procedural characteristics of the FERC licensing process. We have also spent millions of dollars, and are poised to spend many millions more, on the studies, consultations, analyses, monitoring and other efforts dictated by the FERC procedures.

It is important to emphasize our view that FERC's licensing process, especially the new integrated licensing process, provides an appropriately comprehensive, yet flexible mechanism for identifying and addressing the public values potentially implicated by ocean wave energy projects, including environmental concerns and use conflicts.

There is empirical evidence for this position. When we filed our application for a FERC license for the Makah Bay project, literally dozens of stakeholder parties filed comments. Every commentor supported the project, provided we develop and implement a strong monitoring and evaluation program, which we will do. In other words, the FERC process works well enough to resolve the stakeholder interests, and the developer's interests, in a first-ever ocean energy project sited in a marine sanctuary adjacent to fiercely protected natural areas. We expect to receive a license within the year.

Second, it would be truly devastating to our existing projects and the prospects for our industry if Congress were to remove FERC from its role as ocean hydropower regulator. There is no other federal agency with a regulatory system in place that can substitute for the FERC system. Under the best of circumstances, it will take years for MMS or any other agency to promulgate rules adequate to the task. The practical effect of any move to install another federal agency as regulator on state and federal waters would be to put our industry on hold for years -- which means that we will close our doors in the United States. Real jobs will be lost here, and an important new energy resource left untapped.

Third, if Congress were to remove FERC from its role as hydropower regulator on the OCS, it would leave the industry and stakeholders with the prospect of having to work through two or more different regulatory systems applicable to otherwise identical projects with identical impacts using the same waves. It would make no sense.

Fourth and finally, please recognize that the status quo, particularly the assertion of project regulatory authority by MMS, is already producing results that are not in the public interest or consistent with Congressional intent.

Section 388 was, at its root, meant to signal that Congress hopes to stimulate renewable energy development on the OCS. The vision behind Section 388 was one of jobs, clean energy, new investments and, in time, fees from the OCS for the federal treasury.

Today, however, no sensible developer will consider placing a wave, tidal or current energy project on the OCS. We will all stay away from the OCS so long as the regulatory authority is unclear, contradictory, or unduly burdensome. This means that valuable sites under federal jurisdiction will not be developed. There will be no clean power and no rents from the OCS. In addition, the potential for user conflicts, particularly conflicts with the commercial fishing industry, is significantly increased if the ocean hydropower industry is forced to develop its projects entirely within the three-mile band of state waters. It is an artificial and unnecessary constraint.

Mr. Chairman, we believe that current law can be interpreted in a way that avoids conflict. However, the unresolved dispute between the federal agencies highlights the regulatory and potential litigation risk we face today. Our view is that current law should be clarified and we urge this Committee to provide that clarification in amendments to the energy and climate related legislation soon to be considered by the full Senate.

In late April, Finavera testified before the House Committee on Natural Resources alongside environmental groups, scientists, coastal state leaders, and commercial fishermen to urge Congress to help promote ocean renewable energy, while assuring protection for environmental and other stakeholder interests. I have attached for your reference a copy of my testimony and answers to written questions.

There is strong momentum within industry and among the stakeholder groups to bring this new energy resource on line. Please help us move forward by removing unwarranted jurisdictional uncertainty from the law.

We would be pleased to work with you, Committee members and staff to refine potential legislative language so that Congress can send an unequivocal signal in support of responsible development of ocean renewable energy.

Thank you for the opportunity to testify.

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House Joint Memorial 22

Sponsored by Representative COWAN; Representatives BEYER, BOONE, CANNON, DINGFELDER, JENSON, KRIEGER, MACPHERSON, MORGAN, NELSON, READ, ROBLAN, SCHAUFLER, G SMITH, WITT, Senators G GEORGE, L GEORGE, JOHNSON, KRUSE, MORRISETTE, VERGER, WALKER, WHITSETT (at the request of Lincoln County)

To the President of the United States and the Senate and the House of Representatives of the United States of America, in Congress assembled:

We, your memorialists, the Seventy-fourth Legislative Assembly of the State of Oregon, in legislative session assembled, respectfully represent as follows:

Whereas wave energy is a renewable power source with a great potential to reduce our dependence on oil and other fossil fuels; and

Whereas the Oregon coast is particularly well suited for the development of wave energy development and generation; and

Whereas the technology for harnessing wave energy is rapidly evolving in many locations, including Scotland, Portugal and here in Oregon; and

Whereas the Legislative Assembly of the State of Oregon strongly supports the development of this technology for its global benefits, as well as its potential for economic development; and

Whereas the siting of wave energy facilities in the ocean has the potential for direct conflict with other important uses of ocean resources; and

Whereas the only current process for the siting of wave energy facilities in the ocean is, unfortunately, Part 1 of the Federal Power Act, 16 U.S.C. 791a et seq., which is primarily designed for the siting of dams on rivers; and

Whereas agencies of the federal government are themselves in disagreement as to which agency has jurisdiction over the siting of wave energy facilities within the outer continental shelf; and

Whereas recent applications to the Federal Energy Regulatory Commission under the current process highlight these deficiencies with the regulatory process and the disagreements among federal agencies; and

Whereas it appears that the use of the current regulatory process is destined for conflict; and

Whereas that conflict will likely slow the process of developing this important and innovative technology; now, therefore,

Be It Resolved by the Legislative Assembly of the State of Oregon:

(1) The Congress of the United States of America is respectfully urged to include the following proposed language in an amendment to the Federal Power Act, 16 U.S.C. 791a et seq.:

The Federal Energy Regulatory Commission is granted jurisdiction over ocean wave energy conversion devices located in the territorial waters of the United States from the shoreline to 12 nautical miles out to sea. Jurisdiction shall be exercised pursuant to Part 1 of the Federal Power Act, except that the commission shall adopt rules specific to ocean wave energy conversion devices. Those rules shall include, but are not limited to, provisions that provide for expedited processing for a preliminary permit or a license for such devices and for state and local government input regarding location and anchoring of, and electric transmission from, devices prior to the filing of an application for a preliminary permit or a license.

(2) A copy of this memorial shall be sent to the President of the United States, to the Senate Majority Leader, to the Speaker of the House of Representatives and to each member of the Oregon Congressional Delegation.

Adopted by House May 1, 2007

Chief Clerk of House

Speaker of House

Adopted by Senate May 16, 2007

President of Senate

Testimony By
Jason Bak
CEO and Founder
Finavera Renewables, Inc.

Before

The Subcommittee on Fisheries, Wildlife and Oceans
&
Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
U.S. House of Representatives

Joint Subcommittee Hearing
On
Renewable Energy Opportunities and Issues on the Outer Continental Shelf

Room 1324 Longworth House Office Building
Washington, DC
April 24, 2007 -- 2:00 p.m.

Chairman Costa, Chairwoman Bordallo and Members of the Subcommittees, thank you for your invitation to appear before you today.

I am the CEO of Finavera Renewables. We are an energy company focused solely on development, ownership and operation of renewable energy projects around the world. Although we are developing 1500 megawatts of wind energy in Canada and Ireland, my company is represented here today because we are at the cutting edge of ocean wave energy in the United States through our US subsidiary, Finavera Renewables Ocean Energy.

We have three wave energy projects under development in California, Oregon, and Washington, and we are in discussions about others. These are not just paper projects. We are literally weeks away from issuing contracts that will put US steelworkers to work constructing our prototype wave energy buoy, which we are going to install off the coast of Newport, Oregon this summer.

I am joined today by my colleague Alla Weinstein who leads Finavera's ocean energy team. Alla is a true pioneer in this field. The company that Alla co-founded, AquaEnergy Group Ltd., became part of Finavera in 2006 when, after looking closely at every other engineering concept for wave energy, we determined that the technology Alla and her team developed has by far the highest potential to deliver environmentally sound, market-competitive electricity to the American power grid.

The technology works like this: Our buoy, which we call the AquaBuOY, converts the up-and-down motion of waves into a pressurized water flow, effectively creating the equivalent of a 650-foot waterfall. The pressurized water spins a turbine that generates electricity, just like

a conventional hydropower plant, but with no dam and no reservoir. And unlike other ocean energy technologies, the AquaBuOY does not use petroleum hydraulic fluids, so it's safer for the environment. And, of course, there are no greenhouse gas emissions.

My message to you today is simple: Ocean renewable energy's time has come. This is not pie in the sky. We are already turning ideas into jobs here in the US. Now, we're about to turn blueprints into tons of carefully engineered American-made steel. And that steel, in the form of our buoys floating off the West Coast, will soon demonstrate our ability to convert the virtually limitless supply of Pacific Ocean waves into megawatts of clean electricity.

It is a huge potential resource. The amount of energy available for us to convert into clean electrical power off just the West Coast is equal to about one and one-half times all the hydropower in the US. The East Coast and Gulf offer still more potential.

But while our time may have come, we have to acknowledge that our technology and ambitions are maturing at roughly the same time that most federal, state, tribal and local governments are first becoming aware of us. In many cases, government hasn't begun to figure out how to take advantage of what we offer in terms of helping solve the climate crisis.

That is not true everywhere. The State of Oregon has embraced wave energy. Our tribal and state partners in Washington State, and local federal officials, are working hard with us to license our Makah Bay project. The Government of Canada has adopted tax policies aimed specifically at boosting private investment in wave energy. And within US government, the Federal Energy Regulatory Commission is using its hydropower licensing authorities in a helpful way.

If we had to, we could continue forward with our business under the current laws. But if you believe, as Alla and I do, that ocean energy should be an integral, important part of the United States' response to climate change, then the current system is not good enough.

I have a two-part request of you. I also have two commitments to make, one to Congress and the second to my co-panelists who are stakeholders with Finavera in the management and conservation of the ocean.

Here are my requests:

First, I would ask that Congress assure equitable tax treatment for ocean energy alongside other renewables. No special treatment, just let us compete on a level playing field with our clean energy peers, such as wind power.

Second, I would ask that Congress clarify the current regulatory system. Section 388 of the Energy Policy Act was a step in the right direction, but it left many questions unanswered and created a few new ones.

Here are my commitments:

First, I commit to Congress that Finavera will, if given a rational regulatory environment, deliver very large amounts of clean energy, free of climate changing emissions, in an

environmentally sustainable way, at competitive prices. We want the chance to help you solve the climate challenge.

Second, I commit to my fellow panelists and other ocean stakeholders that my company is devoted to preventing the ocean energy equivalent of what Altamont Pass represents in the history of wind development. We want to get it right the first time.

We are the leaders. Finavera's Makah Bay project is the first--and only--wave energy project to enter the federal licensing process. We understand and embrace our responsibility to engage collaboratively with conservationists, fishermen, scientists, regulators and others--so that we do get it right.

Detailed Description of Finavera's Wave Energy Projects

Finavera is actively pursuing development of a number of wave energy projects, including two in Oregon (one of which is intended to be a demonstration project in 2007, the other ultimately a true commercial project), a pilot 1 MW installation in Washington, and a commercial plant project in California. All projects are proposed for locations within a few miles of shore, mostly within state waters and not on the federal OCS, because, first, transmission cables are very expensive and a limiting factor in project location and, second, so as not become involved the apparent regulatory conflict between FERC and MMS over jurisdiction in the zone between three and twelve miles off shore.

In addition, the company has projects under development in Portugal, South Africa and Canada. While the regulatory and jurisdictional aspects of those projects do not relate to the subject matter of this hearing, it is worth noting that various stakeholders in the European Union have been active, and remain quite supportive, in creating incentives for development of renewable ocean energy technologies. The forms of support have included research grants administered by the European Commission, feed-in tariffs specifically designed for ocean energy in UK and Portugal, and concentrated effort of bringing together the European ocean energy community with a goal to reach commercialization as soon as possible. There is also considerable interest in using the technology to serve isolated, energy-poor coastal regions around the world.

- Oregon Projects -- Coos County and Newport

Finavera has applied for, but not yet received a preliminary permit from FERC for the proposed 100 MW Coos County Offshore Wave Energy Plant in Oregon (FERC Docket P-12752). The company is also pursuing a demonstration project off Newport, Oregon, for which Finavera is in the process of obtaining the required state and US Army Corps of Engineers permits. A FERC permit is not necessary for Newport project because it will not be connected to the power grid.

Finavera will be manufacturing prototype buoys at Oregon Iron Works over the next few months, and intends to install a single test buoy at Newport during the summer of 2007. The demonstration tests will be completed by October 2007. Finavera anticipates that test results will be positive, such that the company will be in a position to develop the projects into full utility

scale. If so, the company will need to seek project licenses from FERC, and various other federal and state approvals.

- Washington Project -- Makah Bay

Finavera has applied to FERC for a project license for its proposed Makah Bay project off the northwest tip of Washington's Olympic Peninsula. This is the first and only application to FERC for a license to construct an offshore wave energy plant. The company recently completed a comprehensive environmental assessment under NEPA that concluded that the proposed project would have no significant adverse effects. The FERC licensing process for the Makah Bay project (FERC Docket P-12751) is expected to be completed by the end of 2007. The Makah Bay project, when built, will be relatively small, four buoys generating a total of 1MW, a scale that is a reflection of the very limited onshore grid capacity at the site.

The Makah Bay project is a true pilot, both in the traditional engineering sense, but also in a different way. There simply was no applicable comprehensive regulatory system in existence at the time of project inception by AquaEnergy (now part of Finavera) in 2001. Nobody in the private sector, academia or government -- federal, state or tribal -- had ever been required to think through what issues, concerns, or questions would need to be addressed in order to properly site an ocean wave energy project.

The project team did the right thing. Rather than try to take advantage of the regulatory uncertainty to evade scrutiny of its plans, the company launched a comprehensive outreach effort to all stakeholders. With the inception of the Makah Bay project in 2001, Finavera pioneered a collaborative approach to wave energy project development by involving commercial and recreational fishermen, environmental groups, park users, government stakeholders, public utilities, and universities in the company's planning. This approach ultimately resulted in a very high level of consensus among stakeholders, and paved the way for the FERC licensing process.

We note with particular gratification that the stakeholder advisory council for the Olympic Coast National Marine Sanctuary, in its comments to FERC regarding our license application, has not expressed opposition to our project, but has quite reasonably called for a sophisticated and continuing monitoring and evaluation program, involving sustained stakeholder communications and collaboration. The Makah Tribe is working closely with Finavera on this project as a true partner. The Department of the Interior and NOAA Fisheries and Marine Sanctuary Programs, as well as various Washington State resource agencies are not opposing our efforts, and have worked well with us to identify appropriate environmental protections and monitoring protocols.

To our knowledge, no party is opposing issuance of a FERC license for the Makah Bay project, which marks a considerable achievement for any energy project, let alone a first-of-a-kind project sited in an environmentally sensitive marine environment within the boundaries of a national marine sanctuary. We see no reason that the Makah Bay project will not be licensed, built and put into operation in a manner that meets our interests as project developers while satisfying the concerns of all stakeholders.

- California Projects -- Humboldt County

Finavera is working aggressively with California utilities to launch wave energy development in that state. The company has applied for a preliminary permit from FERC for a project near Humboldt County, along the north coast (FERC Docket P-12753). Among other things, Finavera is currently negotiating a "bankable" power purchase agreement (PPA) with one utility for a significantly sized wave power project using the company's AquaBuOY technology off the coast of California. The company looks to finance the project through conventional commercial debt. Permitting and associated project development activities are on-going.

Explanation of Finavera's AquaBuOY* Technology

Finavera's offshore power plants consist of patented wave energy converters that are based on proven, survivable buoy technology. Clusters of these small, modular devices called AquaBuOYs are moored several miles offshore where the wave resource is the greatest. The power plants are scalable from hundreds of kilowatts to hundreds of megawatts.

The AquaBuOY is a floating buoy structure that converts the kinetic energy of the vertical motion of oncoming waves into electricity. The AquaBuOY is categorized as a point absorber, defined as having a small dimension in relation to the longer wave length in which it is operating. It utilizes a cylindrical buoy as the displacer and the reactor is a large water mass enclosed by a long vertical tube underneath the buoy. The system is comprised of components that have been proven in other marine industries for decades.

The AquaBuOY consists of four elements:

- Buoy
- Acceleration Tube
- Piston
- Hose Pump

The acceleration tube is a vertical, hollow cylinder rigidly mounted under the body of the buoy. The tube is open in both ends so seawater can pass unimpeded back and forth, forcing the piston to move, and in turn extend or compress the hose pumps. Positioned at the midpoint of the acceleration tube is the piston, a broad, neutrally buoyant disk. When the buoy is at rest, the piston is held at the midpoint by the balanced tension of two hose pumps that are attached to opposite sides of the piston and extend to the top and bottom of the acceleration tube, respectively. When the buoy rides the waves, the acceleration tube moves in relation to the piston, and in turn extends or compresses each hose pump in tandem.

The hose-pump is a steel reinforced rubber hose whose internal volume is reduced when the hose is stretched, thereby acting as a pump. The pressurized sea water is subsequently expelled into a high-pressure accumulator, and in turn fed to a turbine which drives a generator. Generated electricity is brought to shore via a standard submarine cable.

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* The unorthodox capitalization in the name AquaBuOY honors the memory of AquaEnergy's chief technologist, Bengt-Olov Sjostrom (B-O), and company co-founder, Yury Avrutin (Y), who died together in December 2001 when their plane crashed while investigating potential wave energy sites along the Oregon Coast.

A cluster of AquaBuOYs would have a low silhouette in the water. Located several miles offshore, the power plant arrays would be visible to allow for safe navigation and no more noticeable than small fishing boats or pilot lights.

Any offshore system must survive the harsh ocean environment. AquaBuOYs are similar to navigational buoys that have been known to survive for many decades. Safely positioned offshore, AquaBuOYs are designed for 100-year storms by riding atop the extreme waves at sea, rather than experiencing catastrophic damage, as during tsunami, from the breaking waves onshore. AquaBuOYs are moored with advanced anchoring and mooring technology.

Because the AquaBuOY power plant systems are modular, it is easy to scale projects to meet growing power demand. Additionally, the system's modularity provides a more consistent flow of power during maintenance cycles, since individual buoys can be taken off-line, while others remain in operation. The simplicity of the AquaBuOY system makes it an ideal choice for sourcing local suppliers, construction, and maintenance. Most components are readily available from domestic suppliers and the job skills required for fabrication and maintenance are present in most coastal communities.

Observations on Current US Regulatory Approach

- Direct Subsidies are Unnecessary

Finavera believes, based on our success attracting private capital, that the ocean wave energy industry does not need direct subsidies. We do, however, believe it would be in the general public interest, and supportive of our industry, for Congress to provide adequate funding to the Department of Energy, including the National Renewable Energy Laboratories, to support independent assessment of ocean energy potential and advanced R&D work.

- Taxation Should Be Equitable

Ocean energy should be treated under the Tax Code on a par with other important renewable technologies, such as wind power. We do not need favorable treatment, just a level playing field. There are numerous legislative proposals under development today that would amend the Code to promote renewable energy. We urge Congress to ensure that ocean renewable energy is given fair treatment in such legislation.

In the longer term, we would call to Congress's attention the tax policies adopted by the Government of Canada and the State of Oregon designed to promote renewable energy technology such as ours, particularly the flow-through tax credits provided under both schemes. Descriptions of those approaches are provided in an attachment to my testimony.

- Federal Agency Authorities Need Clarification Based on Clear Goals and Principles

The February 20, 2007 Report from Congressional Research Service, *Issues Affecting Tidal, Wave, and In-Stream Generation Projects*, provides an excellent overview of the current regulatory system. We would also draw to your attention the March 7, 2007 CRS report, *Wind*

Energy: Offshore Permitting, which provides a very useful complement to the earlier report, especially in its discussion of Coastal Zone Management Act and state jurisdictional matters.

As can be seen from Finavera's experience with the Makah Bay project, we have found a way to work within the current regulatory system. Moreover, there are federal agency officials at FERC, NOAA, the Interior Department, Corps of Engineers, Coast Guard, and elsewhere who are doing their very best to make the current system work in a way that supports development of ocean renewable energy in a way that meets environmental, safety, navigation, fishery access, and other legitimate public concerns.

That said, the current system is not optimal. There are too many uncertainties about the respective authorities of federal agencies. Equally important, there are many questions about the relative powers of federal, state, and tribal levels of governments.

We understand the general temptation to focus on this situation by asking the question: *Who should be in charge?*

But, in Finavera's view, that is the wrong question at this time. We believe the better question is: *What do we want to achieve?*

Congress should focus on goals and objectives before wrestling with the question of who should carry out the mission.

You will not be surprised that we believe Congress should adopt an affirmative, enthusiastic policy to promote development of ocean renewable energy. We also believe that pursuit of that goal should be governed by the following principles:

1. Ocean renewable energy technologies and projects should be held to the highest standards of environmental performance. Blue energy has to be green.

2. The relative business success of different ocean energy technologies should be decided by private markets, not government. Let us compete to find out which technologies do the best job of meeting power market needs. Investors will embrace the most promising technologies, and utilities will buy from the most reliable and affordable sources. We believe that the quality of Finavera's technology will make us brothers-in-arms with the most demanding and prescient investors. Our competitors must feel the same way about their prospects--there is no need for government to pick winners or losers.

3. The States should be encouraged to provide timely leadership in identifying coastal areas that will be suitable, from a public policy standpoint, for ocean energy. We do not want to find ourselves pursuing federal approvals for projects that are not welcomed by the adjacent States in whose waters we may be located and on whose shores we must interconnect our projects.

4. Federal agencies should collaborate to study on a programmatic level certain environmental and other issues that likely are associated with all forms of offshore renewable energy in most locations. For example, it does not make sense to study on

solely a case-by-case basis the potential impacts of ocean energy projects on marine mammal migration. Another example of a "generic" issue would be the impact of energy projects on sand and sediment deposition.

5. Rents, royalties, and other financial terms pertaining to use of the seabed should be established in a manner that promotes, and does not discourage, ocean renewable energy, especially during the decade or more that will be needed to bring the industry to relative maturity. The many comments submitted to MMS from offshore wind interests during the course of that agency's rulemaking on Section 388 offer useful perspective on this key financial matter.

6. Projects currently under development should not be interrupted or delayed while Congress works to enact new law. And, once new rules have been established, those projects that have made meaningful progress under the existing regulatory system should not be forced to re-start the regulatory process. We need to keep moving forward to develop ocean energy sources while making the transition to a more straightforward regulatory environment.

Thank you for this opportunity to testify. I would be happy to respond to any questions, and request that my full written statement be included in the record.

Attachment to Testimony of Jason Bak

Examples of Tax and Other Incentives from Oregon and Canada

Oregon's Approach

Oregon has adopted a collection of programs designed to create incentives for private investment in renewable energy sources, including ocean wave energy.

- Business Energy Tax Credit

The Oregon Business Energy Tax Credit (BETC) is valued at **35%** of 'eligible costs' for any particular project. The manufacturing of renewable energy devices qualifies for the BETC. The maximum eligible cost is $10 million, resulting in a $3.5 million tax credit. The credit is a dollar for dollar credit against State of Oregon Business taxes owed. In addition, there is a 'pass-through' option that converts the tax credit to a cash payment upon project completion. A pass through partner is identified (with assistance from ODOE) and takes the credit on one's behalf in exchange for a 25.5% cash payment based on eligible costs. Details, contact persons and applications can be found at http://www.energy.state.or.us/bus/tax/taxcdt.htm

- Energy Loan Program

The Oregon Energy Loan Program (also known as SELP) promotes energy conservation and renewable energy resource development. The program offers low-interest loans for projects that: save energy; produce energy from renewable resources such as water, geothermal, solar, biomass, biofuels, waste materials or waste heat; use recycled materials to create products; or use alternative fuels. The costs of designing and building an Oregon wave energy equipment manufacturing plant is eligible for a loan from Oregon's Energy Loan Program. Likewise, the costs of planning, designing and building a wave energy facility in Oregon is eligible for an energy loan. It appears that both a manufacturing plant and a wave energy facility would qualify for lower-rate loans resulting from tax-exempt bonds. Projects must be in sited Oregon.
http://www.energy.state.or.us/loan/selphme.htm

- Enterprise Zone Exemption (ORS 285C.055)

Through a short-term tax exemption, an Oregon enterprise zone induces eligible businesses of all sizes to make additional investments that will improve employment opportunities, spur economic growth and diversify business activity. Qualifying new plant & equipment in a zone receives a total exemption for at least three and—in some cases—up to five consecutive years from the local assessment of ad valorem property taxes, which can otherwise have a deterring effect on private investors seeking to start or enlarge operations with a substantial capital outlay. Enterprise zone property (except hotel/resorts and utilities) also is exempt for up to two years while it is being constructed or installed.
http://www.econ.state.or.us/enterthezones/whatare.htm

- Construction-in-Process (C-i-P)

For up to two years, all structures and heavy equipment are exempt from taxation. This exemption is available for each year, in which on January 1 the facility has been neither placed in service nor used or occupied for intended, commercial operations.
http://www.econ.state.or.us/BIexemp.htm

- Strategic Reserve Fund

The Strategic Reserve Fund (SRF) was established by the Oregon Legislative Assembly to support economic and community development in Oregon. SRF projects must be approved for funding by the Governor. With the SRF, Oregon supports cost effective projects that create, expand and preserve the principal traded-sector industries of Oregon. The fund encourages diversification and preservation of regional economies. Administered by the Oregon Economic and Community Development Department (OECDD), the SRF is used to invest in time-sensitive economic opportunities statewide. Awards from the fund must be directly approved by the Governor of Oregon and are most often in the form of a forgivable loan.

- Research Tax Credit

The credit applies to research activity or investments during the tax year. It equals 5 percent of the increase in research expenses over a base amount for the taxable year. Alternatively, the credit is 5 percent of qualified research expenses that exceed 10 percent of Oregon sales for the year (capped at $10,000 for each percentage point in excess). The annual maximum credit allowed per taxpayer is $2 million. This credit is based on the federal R&D credit and available only to corporate taxpayers. **http://www.oregon.gov/DOR/BUS/docs/102-694-9.pdf**

- Strategic Investment Program (SIP)

The Strategic Investment Program (SIP) was authorized by the 1993 Legislature to increase Oregon's ability to attract and retain capital-intensive industry and jobs, particularly in high-technology industry. Under the SIP, traded-sector companies making large investments in new real and personal property are subject to fewer taxes, with the aim of fostering economic growth and improving employment opportunities in the state. Projects approved for the SIP must pay full property taxes on the first $25 million or $100 million invested, a threshold that increases 3 percent each year; all value above this threshold is exempt from taxation. An annual Community Service Fee equal to 25 percent of abated taxes, up to $500,000 or $2 million, must also be paid. Additional fees can be negotiated, as part of the local approval process with the county and city government. http://www.econ.state.or.us/BIexemp.htm

- Workforce Training Funds

The Employer Workforce Training Fund (EWTF) provides a resource for training Oregon's private sector workforce. The emphasis of the funds is to upgrade skills of the workforce in order to increase productivity, keep Oregon businesses viable and competitive, and to offer new skills and opportunities to Oregon's workers. Particular emphasis will be placed on investments that assist labor, businesses and industries with cost effective training projects that retain and

expand jobs in traded-sector clusters that are economically important to the state's regional economies and the state as a whole.

After the company has been in operation for at least 120 days, it can be eligible for workforce training assistance. Application must be made for such grants and issuance of the grants cannot be guaranteed by the State. However, the State and the local partners shall make best efforts to secure grants for training to meet the company's needs and in accordance with state laws and regulations. http://www.econ.state.or.us/BIAworkforce.htm

Canadian Approach

Canada, and in particular British Columbia (where Finavera's head office is located) is a favorable region in which to set up a technology venture, because of generous research and development tax credits. These incentives include federal government incentives (New "flow through of expenses" regime and SRED), and provincial incentives.

- New Federal Government "Flow-Through" and accelerated CCR incentives

In its recently-announced 2007 Budget, the federal government made ocean energy eligible for the Canadian Renewable and Conservation Expense ('Flow Through') and the Accelerated Capital Cost Allowance regime.

The new tax credits will help ocean energy companies raise money for development work. The 'flow through' tax credit—which currently available for mineral and wind resource development—encourages investment in exploration by offering tax incentives to investors.

On April 18, 2007 The Honorable Gary Lunn, P.C., M.P., Canada's Minister of Natural Resources, wrote Finavera the following letter:

> *Dear Mr. Bak:*
>
> *Thank you for your letter of March 26, 2007, regarding tax treatment to ocean energy.*
>
> *On March 19, 2007, our government displayed its commitment to the environment and renewable energy by announcing the extension of the accelerated capital cost allowance and Canadian Renewable and Conservation Expense (CRCE) to ocean energy and other renewables. As active proponents of this amendment, Finavera Renewables helped to successfully illustrate to government the utility of these market driven tax incentives to support Canada technology and domestic industry.*
>
> *Through the implementation of these important tax incentives, the Government of Canada is investing in technologies that contribute to reductions in greenhouse gas emissions, improved air quality, that promote the diversification of the energy supply and a competitive economy. We will support the ocean energy sector and its Canadian developers and technology leaders such as Finavera.*

Again, thank you for writing on this important matter.

Yours sincerely,

The Honourable Gary Lunn, P.C., M.P.

Following are the details of the incentives promulgated in the 2007 Budget.

Accelerated Capital Cost Allowance for Clean Energy Generation
A 50-per-cent accelerated capital cost allowance (CCA) is provided under Class 43.2 of Schedule II to the Income Tax Regulations for specified energy generation equipment. Eligible equipment must generate either (1) heat for use in an industrial process or (2) electricity, by:

- using a renewable energy source (e.g. wind, solar, small hydro),
- using waste fuel (e.g. landfill gas, manure, wood waste), or
- making efficient use of fossil fuels (e.g. high efficiency cogeneration systems).

Class 43.2 was introduced in 2005 and is currently available for assets acquired on or after February 23, 2005 and before 2012. For assets acquired before February 23, 2005, accelerated CCA is provided under Class 43.1 (30 per cent). The eligibility criteria for these classes are generally the same except that cogeneration systems that use fossil fuels must meet a higher efficiency standard for Class 43.2 than that for Class 43.1. Systems that only meet the lower efficiency standard continue to be eligible for Class 43.1.

Where the majority of the tangible property in a project is eligible for Class 43.1 or Class 43.2, certain project start-up expenses (e.g. feasibility studies, engineering and design work) qualify as Canadian Renewable and Conservation Expenses (CRCE). They may be deducted in full in the year incurred, carried forward indefinitely for use in future years, or transferred to investors using flow-through shares.

The Government continues to review Class 43.2 on an ongoing basis to ensure inclusion of appropriate energy generation technologies that have the potential to contribute to energy efficiency and the use of alternative energy sources.

The Federal Budget 2007 proposes to extend eligibility to an emerging source of renewable energy—wave and tidal energy—and to a broader range of applications involving active solar heating, photovoltaics, stationary fuel cells, production of biogas from organic waste, and pulp and paper waste fuels. The Federal Budget 2007 also proposes to extend eligibility for Class 43.2 to assets acquired before 2020.

By encouraging investment in these technologies, these changes will contribute to a reduction in greenhouse gas emissions, improve air quality and promote the diversification of the energy supply.

Wave and Tidal Energy Equipment
The 2007 Federal Budget proposes to extend eligibility for Class 43.1 and Class 43.2 *to include equipment that generates electricity using wave or tidal energy, provided they do not do so by means of a barrage or other dam-like structure.* Eligible equipment will include support structures, control, conditioning and battery storage equipment, subsea cables and related transmission equipment, but will not include buildings, distribution equipment or auxiliary electrical generating equipment and any other property not used primarily for the purpose of the wave- or tidal-energy system. The change will apply to eligible assets acquired on or after March 19, 2007.

- Federal Government SRED Program

The Canadian government provides over $1.5 billion of incentives each year to companies and other taxpayers who do research and development work. This program is known as the **Scientific Research and Experimental Development Program (SRED).** Current information on the program is available on the **Canada Customs and Revenue Agency (CCRA)** web site at http://www.rc.gc.ca/sred/. The CCRA is responsible for administering the SRED program, while the Department of Finance, an executive branch of the federal government, is responsible for the legislation that governs it.

What is SRED?
SRED is designed and administered as a federal tax incentive program to encourage Canadian businesses of all sizes and in all sectors to conduct scientific research and experimental development (SR&ED) in Canada. The aim is to encourage and, indirectly, finance new, improved, or technologically advanced products or processes. SRED is the largest single source of federal government support for industrial research and development. SRED claimants can apply for SRED investment tax credits for expenditures such as wages, materials, machinery, equipment, some overhead, and SRED contracts.

Who qualifies for SRED?
Generally, a Canadian-controlled private corporation (CCPC) can earn an investment tax credit (ITC) of 35% up to the first $2 million of qualified expenditures for SR&ED carried out in Canada, and 20% on any excess amount. Other Canadian corporations, proprietorships, partnerships, and trusts can earn an ITC of 20% of qualified expenditures for SR&ED carried out in Canada. Generally, a CCPC with a taxable income in the immediately preceding year that does not exceed the business limit may receive a portion of the ITC earned as a refund, after applying these tax credits against taxes payable. The ITC earned by a Canadian corporation that is not a CCPC is non-refundable, but may be used to reduce any taxes payable. The ITC earned by a proprietorship or certain trusts may be partially refunded after applying these tax credits against taxes payable.

What kind of projects qualify for SRED?
To qualify for the SRED program, work must advance the understanding of scientific relations or technologies, address scientific or technological uncertainty, and incorporate a systematic investigation by qualified personnel. Work that qualifies for SRED tax credits includes:

- experimental development to achieve technological advancement to create new materials, devices, products, or processes, or improve existing ones;

- applied research to advance scientific knowledge with a specific practical application in view;
- basic research to advance scientific knowledge without a specific practical application in view; and
- support work in engineering, design, operations research, mathematical analysis, computer programming, data collection, testing, or psychological research, but only if the work is commensurate with, and directly supports, the eligible experimental development, or applied or basic research.

How the SRED program financially assists companies—examples
Even if a claimant has no revenue, or has revenue but is not yet profitable, it can receive the SRED credits in cash. The federal government will send such a claimant a check.
In British Columbia, that can amount to as much as 68 cents back on every incremental SR&ED dollar spent by the claimant.

Generally, Canadian-controlled private corporations (CCPCs) with less than $200,000 in taxable income can receive a refundable investment tax credit (ITC) of 35% (68% after the gross up - see below) of qualifying SR&ED expenditures, to a maximum of $2 million of expenditures. Most other Canadian corporations, proprietorships, partnerships, and trusts can receive an investment tax credit of 20% of qualifying SR&ED expenditures.

So, for every $1.00 the company spends on research and development *including an overhead allowance*, it may be eligible to receive up to $.35 back in either *cash* or a tax credit from the federal government. From a corporate finance point of view, this is similar to having a 35% equity infusion into the business. Public companies and non-CCPCs, such as foreign controlled corporations, are limited to a 20% grant.

The federal government also allows claimants to claim overhead on their SR&ED expenditures. For companies that have a dedicated R&D facility this is easy to do, but if the R&D is part of the company's overall operation the calculation of overhead can be cumbersome. Therefore, the government permits claimants to claim an overhead "proxy" which amounts to 65% of their direct cost. *Example:* a company hires an R&D employee and pays her $100K during the fiscal year. The company can actually claim the 35% SRED grant on its total "deemed" cost of $165K (i.e. $100K x 1.65).

- British Columbia (BC) and other provincial SRED incentives

Certain provinces, such as British Columbia, also provide a provincial SRED credit. In the case of BC, the Province provides an additional 10% SRED credit. So, for every incremental SR&ED dollar spent, a total of $.68 can be recovered by way of SRED credits—taking into account the provincial and federal SRED credits on the "overhead topped-up" direct R&D cost.
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Finavera Renewables Responses to Questions from Chairwoman Bordallo and Chairman Costa May 22, 2007

Questions from Chairwoman Bordallo:

Question 1. *Memorandum of Agreement*

In its testimony, FERC advised that the Minerals and Management Service and the Federal Energy Regulatory Commission are devising a memorandum of agreement to assist the applicant in the regulatory process. Would it be helpful to you if NOAA was involved in this MOA so that you could know what will be required of you in terms of compliance with the environmental laws? Would it be helpful if one agency, instead of several, were involved?

Finavera Response: Finavera strongly supports those measures that would allow efficient and predictable coordination of effort among the various federal agencies involved in regulating ocean renewable energy. We take the same view of the importance of effective coordination between the federal agencies and the states.

In an ideal world, the number of federal agencies involved in deciding whether and under what terms to allow the development ocean renewable energy projects would be a small one. There is, however, no agency that appears ready today to take exclusive responsibility for the full range of issues related to ocean renewable energy development. We fear that, were Congress to decide to assign exclusive responsibility to a single agency, we would face a very long period of regulatory inaction and confusion which would stop project development and devastate our industry.

We understand that FERC and MMS need to resolve their different views of their respective jurisdictions over water-powered projects in the portion of the OCS between 3 and 12 nautical miles offshore. That is an important issue to overcome for the future of ocean renewable energy, but there are other regulatory and procedural issues of equal importance where NOAA's jurisdiction and expertise is implicated. We see no reason why NOAA should not be fully involved in development of an interagency agreement or protocol that would set out the federal agencies' roles and responsibilities.

Interagency coordination is almost always hard to achieve and harder to maintain over time. The fact that the agencies are still struggling to come to terms on some initial matters suggests that the Administration has not made such coordination a priority in this case. We suggest that the Congress should take those actions that will prompt the Administration to move forward.

As a starting point, we believe that MMS and FERC can, if suitably motivated, identify a set of legal concepts and procedural steps that would allow the agencies to fulfill their existing statutory mandates without undue conflict. For example, we do not perceive a fundamental conflict between an interpretation of existing law that would recognize clear authority in FERC to license wave, tidal and current energy projects in the U.S. Territorial Sea and clear authority in MMS to set the terms of leases, easements and rights of way to use the OCS within the EEZ. These are distinct tasks that can be coordinated responsibly. We would urge the Subcommittee

to develop and support legislation, ideally as amendments to the energy legislation soon to be under full Committee review, that would help the agencies get past their threshold disagreements and move forward to set up a sensible regulatory approach under their respective statutory mandates. We would be happy to suggest potential language.

Questions from Chairman Costa:

Question 1. *You mention that your Makah Bay project is a true pilot project in the sense that you had to conceive, with minimal guidance, a comprehensive outreach effort to all stakeholders and a collaborative approach to wave energy development at the project's inception in 2001, to determine how to properly site an ocean wave energy project. You note that a high level of consensus resulted.*

- *I understand that that Finavera's project in Washington State took about four years to permit, and I've heard that Verdant Power's project in New York also took several years. Is that appropriate?*

Finavera Response: The considerable amount of time required to bring the Makah Bay Project to its current status reflects the challenge inherent in any effort to develop a first-of-its-kind energy project at a location owned by the American public adjacent to some of the most beautiful and environmentally sensitive places in the country. We wish it could have been a quicker process, but we have no regrets. It was important to take the time required to build understanding and an adequate degree of trust among all the stakeholders.

We do not believe that future projects will move so slowly, and we certainly hope they will not. The licensing of each project will probably make it incrementally easier to license the next one -- assuming that project developers can demonstrate, through monitoring and evaluation, that project impacts are not problematic from the standpoint of public policy.

Our greatest scheduling-related concern at this point stems from the unresolved jurisdictional debate between FERC and MMS. The agencies' inability to decide how to collaborate in meeting their duties has the potential to discourage project development, delay agency decision-making, interrupt licensing and leasing proceedings, and encourage litigation. We urge the Subcommittee to take this issue on directly and immediately.

We would encourage the Subcommittees to recognize that the efficiency of any licensing process will be heavily influenced by the quality of engagement by the states. State governments have numerous authorities that are related to siting and operation of our projects. The states need to be true partners with the federal government in choosing the proper locations for projects, license conditions, and monitoring and evaluation procedures. The federal government should affirmatively encourage informed, coordinated engagement by the states in promotion and regulation of ocean renewable energy. We believe that proper use of the CZMA will be helpful in this regard, as will well-run, inclusive NEPA procedures.

Question 2. *Your testimony says that a stakeholder group requested that Finavera lead a sophisticated and continuing monitoring and evaluation program. Please tell us more about that program.*

- *What challenges does Finavera face in leading a such a monitoring program? What will that cost and over what time frame?*

- *Will your data and findings be made public?*

Finavera Response: The key challenge we face in designing the monitoring and evaluation program for the Makah Bay Project is the problem of scale. The Makah Bay Project is small, involving just 4 devices that collectively have capacity to generate 1 megawatt of electricity. Though we intend to sell the electricity it generates, it is not a true commercial-scale project; it is a pilot demonstration project. Yet, because it is the first project to apply for a FERC license, there is considerable interest within the company and among stakeholders to use the project to learn all we can from it. We need to reach agreement with the stakeholders on a program that is extensive enough to address legitimate concerns, but is not so expensive that it renders the project economically infeasible.

We do not know at this point what the likely cost will be. We can say with confidence, however, that we would welcome participation in the monitoring project from federal and other agencies in a manner that would expand resources in order to take advantage of the learning opportunity the project represents.

We would expect that the results of a program negotiated with the Makah Bay Project stakeholder community to monitor and evaluate project impacts on public resources and values will be made public.

Question 3. *I understand from your testimony that Finavera believes that direct subsidies to the ocean wave industry are unnecessary.*

- *What are your thoughts on an access fee or royalties for renewable projects like yours on the Outer Continental Shelf?*

Finavera Response: Finavera believes that it is appropriate, as a conceptual matter, for the federal government to charge a fee for use of the OCS by renewable energy projects, particularly to the extent the use precludes use of the same area by the general public. We do not, however, believe that a royalty is appropriate, since a renewable energy project does not use up a finite resource.

We believe strongly that any fee applied by the federal government to renewable energy projects on the OCS should be tailored to acknowledge the financial realities of these projects and the national policy imperative of expanding renewable energy resources. For some time to come, ocean renewable energy projects of all kinds will be small and will not generate substantial revenues, let alone profits, for developers or owners. Fees should not discourage development of projects that hold the potential to contribute millions of megawatt hours of clean electricity to the nation's power system. The public will directly benefit from these projects. For the first phase of this new industry's life, the public interest will be fully and properly served by promoting the projects themselves. Once the industry becomes established, and the financial and

regulatory risks are reduced to more conventional levels, use fees may become a reasonable component of the regulatory system.

Question 4. *You note that most ocean wave energy projects currently are proposed for locations within a few miles of shore, mostly within state waters and not on the federal OCS "because, first, transmission cables are very expensive and a limiting factor in project location and, second, so as not become involved in the apparent regulatory conflict between FERC and MMS over jurisdiction in the zone between three and twelve miles offshore."*

- *Please tell us more about the cost of transmission cables and how we might address that challenge in encouraging renewable energy projects further off-shore.*

Finavera Response: Underwater power cables are expensive. They cost approximately $1 million per mile. This sort of expense is proportionally small for a large oil or gas platform that might cost $1 billion or more and produce many billions of dollars worth of commodity products sold into global commercial markets. But for any renewable energy project at this stage in the industry's life, the cost of power cable is hugely disproportionate to the cost of other features of the project, including permitting, manufacturing, and operations, and can easily render a project unprofitable. As ocean renewable projects grow larger over time, the proportionate cost of cabling will diminish, and it is likely that some will be sited farther offshore, where the energy in waves is greatest.

Although the cost of undersea cables is expensive, we are most concerned about the potential lack of capacity in the on-shore transmission system currently serving coastal areas throughout the country. Many coastal areas with potentially valuable wave, current or tidal energy sources are served by transmission lines that have no ability to carry significant additional amounts of electric energy. Finavera believes that the Congress should consider directing the Department of Energy and the relevant federal power marketing administrations to identify the parts of the coastal transmission system that will need expansion to carry the clean renewable energy that our industry hopes to bring ashore in the coming years. The nation will need to know where to steer new investments in transmission infrastructure and, given the many public issues related to transmission infrastructure, we will need a number of years to reach the point of making good decisions about the location and character of new construction.

Question 5. *Given the cost of transmission and other challenges associated with projects further off-shore, in deeper waters, how many years away do you realistically think we are from commercial projects on the OCS?*

Finavera Response: The principal impediment today to location of ocean wave, tidal, or current energy project on the OCS is the unresolved jurisdictional dispute between FERC and MMS. Congress should expect that no developer will choose to risk becoming entangled in that argument, and all development will be planned for sites less than three miles offshore until it is clear which federal agency is responsible for what features of wave, tidal or current energy project development on the OCS.

This is an unfortunate situation that hurts the public interest. It arbitrarily constrains project siting to a fairly narrow strip of ocean, thereby increasing the potential for user group conflict, reducing the potential size of the developable renewable energy resource, and increasing the regulatory risk associated with all projects.

If the FERC-MMS dispute were resolved, especially if it were resolved with appropriate legislation, it is highly likely that each project under consideration by Finavera could be shifted or expanded to include areas on the OCS. We believe that other developers would react similarly. In other words, there will not be a delay in movement of energy projects onto the OCS once the federal agency jurisdiction problem is resolved (and assuming that transmission capacity constraints can be addressed).

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