

Commissioner Michael Connor-NCPA Speech 4-23-12

Michael Connor: I seem to have a little bit of luck these days, and I guess in following up or being part of discussions about secretary Chu's memo. Usually, I get to be the focus of a lot of attention. About three weeks ago, probably three weeks ago, I had a hearing, our annual budget hearing in front of the Water and Power subcommittee. Last year, when I did it with USGS, the guy from USGS who was with me basically said, "Boy, am I glad I'm here with you." Because I don't think he got any questions in the two and half hours we were up there. I felt the same way this year with the Power Marketing Administrations when they were up there as part of that same hearing.

I know there's a lot of issues that are being worked through and I certainly can appreciate that in the discussions, it sounds like it was a good one this morning. We're working hand-in-hand with the DOE on a lot of initiatives. Of course, we are tied to the Power Marketing Administrations completely and totally as they market the resource that we try and maximize for your all's benefit.

So, with that I will start. Did I turn on the mic? My people mic-ed me up, and the last time I did this I turned off the mic and left it off. They were not happy with me. I'm a little bit more logistically on the ball today.

Thank you for the opportunity to speak with you all today. This is a great organization and I know that you are doing a lot of great things out in California. I have to say, I am very thankful also to be doing this, this morning because I have come to have this fix that I need every week for getting a good dose of Californians.

Usually, it's out in California as I am working on the array of issues that, quite frankly, take up the vast majority of my time. Today, later on, I'm going up to Boise and then coming back to DC. So I will miss my opportunity to get that share of California access, so this will do it for this week.

I know we are not free of the issues that we have to work out between ourselves, Bureau of Reclamations and NCPA, in particular that address the CVP restoration find charges that we assess on an annual basis. I know that you're having a dialogue about that, we're having a dialogue about that within Reclamation, within the administration.

It's a good dialogue; I think there are some issues that truly we need to be working on with you. I know we're not doing it in the time frame that you'd like. But I do think the dialogue is a good one right now and I do expect that we will be making progress on that in the coming year. So, with that, since I do spend a lot of time talking to your organization about that particular issue and I'm happy to take any questions during the Q&A session. But I did want to step back and talk a little about Reclamation's broader role that we have in the overall focus that the administration has on energy development in this country.

President Obama has made it clear that our nation needs an "All of the Above" energy strategy. One that pursues, both increasing energy production using domestic resources and one that requires us to use energy more efficiently.

That agenda in itself has, obviously, been part of what the President's been focused on during his entire term in office. Particularly, since he weighed out the agenda, a blueprint for a sustainable America moving forward. And energy is one of the foundational elements of that strategy.

Specifically, he has put a goal out there, for us federal agencies to try and meet, that we achieve an 80 percent of electricity in this country from a diverse set of clean energy sources by 2035. The good news is, and quite frankly, there was a dialogue about this early on within the administration as what is the role of hydropower in that overall initiative.

Hydropower is a fundamental part of that view; that it's a clean energy source, it's incorporated specifically when the President put out that goal. It did include the hydropower resource that, both, Reclamation, the Corps of Engineers that were responsible for it, and certainly that were trying developing overall throughout the administration including DOE.

Hydropower is an important part of Department of the Interior's aggressive efforts and we have an array of initiatives on energy. We are the one stop shopping for the "All of the Above" strategies that the President has put forth. We have conventional resources that we permit on public lands and offshore energy resources. There's quite a debate about that these days.

But, we feel very strongly that the facts speak for themselves and that the onshore and the offshore conventional resources, oil and gas, are at their highest level of production than they've been in quite a while. For that the Department, and Secretary Salazar in particular, are very proud of the efforts that we're making in that area.

Also, the Secretary has been very, very focused on renewable energy resources, non-hydro renewable energy resources. We know, hydropower is, by far and away the most substantial renewable energy resource produced in this country right now. But there are aggressive efforts underway in developing and permitting, bringing online, other non-hydro renewable resources.

The department has a high priority goal overall of permitting, facilitating, bringing online, during the first three years and through this coming year, 9,000 megawatts of renewable energy resources on public lands. That's a pretty astounding number quite frankly.

Every time I turn around, the Secretary is at another groundbreaking or event announcing a new permit or moving forward on a significant solar or even wind project that's underway. Just to give you a context, 9,000 megawatts, overall, Reclamation is the second largest producer of hydropower in the country. We've got about 15,000 megawatts of capacity in our portfolio, 58 power plants. 15,000 megawatts has taken us over 100 years... Well, maybe not quite 100 years, since the hydropower was an afterthought with respect to water development.

But that gives you a sense of what we're trying to do in a short amount of time, 9,000 megawatts versus our whole portfolio, which is 15,000 megawatts. But, at the same time, while we're no longer developing those large, large facilities, the Grand Coulees at 6.6 gigawatts, and Hoover

Dam at 2,000 megawatts. We are still having a very aggressive agenda to try and bring on more hydropower. It's part of that "All of the Above" strategy.

At the same time, while we are trying to bring online a lot new resources, we're also trying to prepare ourselves for the future and we're partnering up with DOE and Corps of Engineers and trying to develop cutting edge research and development on new technologies that we can use in our facilities.

I gave you the statistics overall for Reclamation. But those were the statistics with respect to what we're doing at the facilities that we operate — our 58 power plants.

Overall, and this is where most of the focus of our efforts have been in the area of hydropower, is the facilitation or the identification of new opportunities for privately developed hydropower at our facilities. I mentioned our 58 power plants that we have, our 15,000 megawatts of capacity. We generate enough electricity to serve \$3.5 million homes.

But overall, when you include the private development on our facilities, there are more than 135 power plants located and operated on Reclamation property. They've got 16,000 megawatts of capacity overall. So, that's a pretty significant additional element of hydropower capacity that are being developed at our facilities by private entities.

As I mentioned, this has been the focus of our efforts, to try and facilitate more of this activity. To work hand-in-hand with the private sector to identify opportunities that makes sense for future development.

The core of this or the initiation of this whole effort, on a very aggressive level, started in about March of 2010. Bureau of Reclamation, Department of Interior, a core of engineers and Department of Energy signed an MOU.

Secretary Chu signed it, Secretary Salazar signed it and Assistant Secretary Darcy were all participants in an effort to sign an MOU. Which was not a feel good MOU, it was an MOU with some specific goals and accomplishments that we looked to carry out in the area of hydropower and other renewable resource development that those three entities and departments could do.

We really wanted to sync up our effort, particularly on hydropower but also overall, in trying to push what we see is this energy-water nexus that exists, and ways that we can make progress if we work together.

We released a two-year progress report about a week ago, which you can find online. It identifies and highlights the progress being made towards 13 high-level goals that are specifically named in the MOU, and 17 specific action items. Let me go through some of the accomplishments that have been identified in that two-year report.

Assessments. We've completed numerous assessments of different hydropower resources. I'm going to talk about a couple of those that we done, specifically in Reclamation facilities. But overall, we've developed a database for all existing U.S. hydropower infrastructure.

Not only is that the three departments working together, we work together with National Hydropower Association, a lot of different stakeholders who are invested and interested in hydropower development. We feel like this has been a good effort.

Tools for optimization. We've been very aggressive in working collaboratively with the private sector as well as with the agencies in developing tools for optimizing the operation of hydropower facilities. We're seeing a lot of value from this activity in Reclamation ourselves. We are taking those tools, applying them to our own facilities and we expect to be getting, yielding a lot more megawatt hours than we have traditionally through our existing operations.

I should just say, in addition of optimization, looking for new opportunities for upgrading our facilities, upgrading, modernizations et cetera, this is not new but we're trying to take it to the next level.

I say it's not new because over the last 25 to 30 years Reclamation, through working with our partners including you all, we've brought online about 2,000 megawatts of new generating capacity, just through our Upgrades Modernization program. That's basically the equivalent of the generation capacity at Hoover Dam over the last 30 years.

We think there's a lot more potential there. We think, by working with you all, we can identify those opportunities where it makes sense from an economic perspective, make new investments, generate additional hydropower.

As I mentioned before, research has been a fundamental part of this effort. The last year, the Department of Energy and Department of the Interior... and I like the fact that they allow us to include ourselves -- the resources that we put in were pretty significant, from Reclamation's perspective, one to two million dollars -- but it's dwarfed by what DOE and their R&D program put in.

So overall, \$16 million for 16 demonstration projects for new technologies, two of which are being run at Reclamation sites. Those projects are underway. We expect to be reporting back on identifying the benefits of some of those new technologies that we're testing.

We've also done a lot of collaboration with respect to the impacts of climate change on water resources and then of course, how that affects, in the future, hydropower generation.

That's one area that I think is just absolutely a necessity and fundamental that we, in the Corps of Engineers, DOE, that we don't be in our own little silos, doing our own little thing, but we all have the same interests there.

I know there's a lot of interest out there, with all of our stakeholders. We need to be doing a collaborative approach to identifying those risks that we see, those impacts that we need to start dealing with.

Of course, some of those things are ongoing at this point in time. One of the areas of modernizations, upgrades, that we've done, are turbines.

In fact, we've done a pretty impressive program at Hoover Dam, not just with respect to our generators, but looking at our turbines, trying to get low-head turbines in place as the Colorado

River Basin was plummeting in the midst of the 11-year drought that we were in, and Lake Mead levels were plummeting. That's what I was referring to.

We were getting very concerned about getting down to a very low level of elevation in Lake Mead. Putting into place this opportunity to put in place new turbines, to be able to generate the same level of power at low head, that's going to be an ongoing effort over the next couple of years. It's already started.

Fortunately, last year was a bountiful year in the Colorado River Basin, brought back the elevation of Lake Mead, I think it was about 35 feet in one year. We got down to the magical 1,075 elevation. We were basically 2.5 feet above that elevation, which is where you start taking shortages in the lower basin. It would have been the first ever.

Then, lo and behold, 2011 came upon us. Record year as far as precipitation, we're back up well above 1,100. I think 1,015 feet in elevation is where we're projected to be at Lake Mead at the end of this year.

Just to indicate the effects of climate change, etc., whatever it is causing these ongoing drought episodes, we're at near record low precipitation in the upper Colorado River Basin this year.

We're also looking at basin-wide opportunities. This has been a part of our collaborative efforts with the different departments, as well as a number of stakeholders.

We've focused on the Deschutes River Basin in Oregon as an opportunity, maybe, to look at revamping some of the hydro facilities in the Deschutes Basin, and addressing a lot of the environmental services needed.

This is something that's been done basin-wide in the Penobscot River Basin in Maine, and we'd like to look for other opportunities to engage in that effort.

We've established a Federal Inland Hydropower Working Group, which now includes staff from 15 different federal entities to coordinate ourselves. I think it does have value. Once again, I'm trying to demonstrate that we are very results-oriented, and the fact that maybe we can be on the same message, have the same programs, coordinate those efforts.

I think it makes it easier, at times, for you all, outside the federal government, to deal with us. We posted a number of R&D workshops on technologies, as I've mentioned. We've initiated new studies on pump storage and the ancillary grid services that can be provided by hydropower.

I think most importantly, maybe even than everything else, we've had a very focused effort on improving the licensing process for developing new hydro opportunities at the federal facilities.

We have a rather complex set of laws that apply to us; the fact that FERC has jurisdiction over some of our facilities and you have to go through the first licensing process to bring private hydro development on some of our facilities.

Then we also have Reclamation being in charge at some of our projects, completely without FERC, for bringing on new hydropower resources at our facilities.

Then you have to go through the Lease of Power Privilege process that we, Reclamation, own. I think we're making progress in both areas, to provide some clarity for private hydropower development, as we try and increase the opportunities out there for new power generation.

Over the last three years, through all these efforts we've been looking for new opportunities. We're trying to streamline our processes, add more clarity. We've brought online more than 30 megawatts of new power that's been licensed at Reclamation facilities.

Thirty megawatts in three years includes both the FERC licensing process and the Lease of Power Privilege process. If you include the turbine upgrades that we have done at our facilities, that's the equivalent of over 100 megawatts of new generation capacity that we've brought online at our facilities.

We're happy with that record. We're more happy with the fact that that's the stuff that we've permitted, licensed and brought online. There's a lot in the pipeline, so to speak, and we anticipate that number will keep increasing over the next several years.

Just so you're aware -- and I think you've had a lot of input into this process -- our Lease of Power Privilege processes, we identify how we do things through a process called Directive and Standards. This is the Reclamation manual that identifies the process and procedures for moving forward in different areas.

We have a new Directive and Standard, in its final draft form, that's been published for our Lease of Power Privilege process. It's the first time that we think that we've added clarity to the process.

We're taking final comment, and we hope to finalize that sometime this summer. We ultimately think that it will make the process easier for people to work with us on looking for new opportunities. I would encourage you all to review that final draft. Get your last comments in.

I think we've worked pretty hand-in-hand, had a lot of workshops, taken a lot of comment, and I think we're in a good place now.

Back in March of last year, we did a Phase I assessment report on Reclamation facilities, looking for opportunities for developing new units at existing facilities. We identified over 190 sites where there was an additional 225 megawatts of potential additional capacity that could be developed, all told, about 1.2 million megawatt-hours of electricity that we could bring online.

Those were opportunities not just technically feasible, but we did run that through an economic screen to identify where we thought there was potential economic viability for private sector development.

We've moved forward on a number of those projects and opportunities that were identified in that Phase I report.

Two weeks ago, we followed up that Phase I report with a Supplemental Assessment Report or a Phase II report, which looks specifically at Reclamation's canals and conduits; the potential for low-head hydro opportunities that could be developed in our facilities.

The results of that report that was out two weeks ago, 370 sites were identified with the potential to generate an additional 365,000 megawatt-hours of clean hydro renewable energy resource.

If you look at the two reports together, the potential is well over 1.5 million megawatt-hours that we can add to our portfolio.

The second report focused on the 47,000 miles of canals, lateral strains, pipelines and tunnels that we have in our portfolio. We did not run the low-head hydro power in the Supplemental report through that economic screen, so there's still some work that needs to be done by private entities interested in that hydropower development opportunity.

The screen was a drop of at least five feet, operates for at least four months of the year, and have a generation potential of at least 50 kilowatts based on the flow rate of the canal and the drop height. It was a screen that we thought really did demonstrate technical viability.

Overall, based on industry estimates, working with the National Hydropower Association, we think that the hydropower additions that I just mentioned would create an additional 1,200 jobs, private sector, federal, construction, manufacturing, engineering, operations, maintenance and administration.

That's been the portfolio that we've been working on. We're pretty proud of it. We think we've got a lot more work to do, but I think we've put hydropower back in the mix of a sustainable resource that we can rely on in the future, hopefully strengthening our existing facilities and looking for new opportunities.

With that, I'll just talk a little bit about California, specifically, then I'm open to take questions and answers if we've got some time left.

I think about a month ago, I made a talk to ACWA, who was back here in Washington DC. I was bemoaning the fact that it was pouring rain on that day, too, and wishing that it was doing the same in California.

Fortunately, whether it's people taking pity on me, you, and everybody else, there has been a substantial amount of precipitation over the last month, particularly in Northern California, where our generating facilities are, which has greatly helped the situation, from a water supply perspective, and from a power generation perspective.

It's welcome news, because we were headed for a very, very significantly bad situation. Still, you saw that in the Sacramento drainage in Northern California, as I mentioned, things have really turned around. It's still a pretty significantly low water year in the San Joaquin River Basin. We're still having some significant issues there, and that's exacerbating some of the water supply issues that we have.

But, overall, Mother Nature has been cooperative over the last month, and we certainly appreciate that. About a week ago, we announced a new Central Valley Project water allocations.

All of our contractors in the north, whether they be the Sacramento River Settlement contractors, the North-of-Delta Water Service contractors, M&I, we're all now at 100 percent of the contract allocations, so that's indicative of where we are.

Shasta and our other northern storage facilities... More water equals more in the way of water allocation, it means more in the way of power generation.

Overall, the 12-Month Rolling Forecast of Generation that we issued last month predicts approximately four million megawatt-hours of generation available from our CVP facilities now. Pumping is expected to consume approximately 1.3 million megawatt-hours, so we've got a good differential there, based on some of the precipitation levels that we've seen over the last month.

Of course, as we continue to have a good dialog, an active dialog, and try and address the issues associated with the particular power customer's charge for payments into the Restoration Fund, it's good to know that at least more water also yields more payments from the water side of the equation, which I think helps us bridge the gap a little bit on the issues that we have, notwithstanding that that's not a solution to the problem, and we still need to have that ongoing dialog.

I see Jim readily agreeing with that statement. I agree. There is an equitable issue there that we definitely need to deal with. I will wrap up my comments on that point, knowing that there's still going to be a very active dialog that we have with NCPA.

I'm willing to take any Q&As, if you've got some time.