Supplemental Testimony

Provided By

Jon C. Lambeck, Manager of Power Resources

Metropolitan Water District of Southern California

On

Investment in Small Hydropower: Prospects of Expanding Low-Impact and Affordable Hydropower Generation in the West

Before the

U.S. House of Representatives
Committee on Natural Resources
Water and Power Subcommittee

July 29, 2010

Metropolitan Water District of Southern California
700 North Alameda Street, Los Angeles, California 90012 • (213) 217-6000

On July 29, 2010, during the House Water and Power Subcommittee hearing on "*Investment in Small Hydropower: Prospects of Expanding Low-Impact and Affordable Hydropower Generation in the West"*, Chairwoman Napolitano requested the Metropolitan Water District of Southern California (Metropolitan) provide additional testimony for the record on the issue of Federal Energy Regulatory Commission (FERC) oversight of Metropolitan's small conduit hydropower generators. Metropolitan appreciates this opportunity to respond.

As provided in our original testimony, Metropolitan has developed 16 conduit hydropower generating plants on its water distribution system. These generating plants range in size from one megawatt (MW) to 29.7 MW. Each plant has been granted an exemption from FERC licensing requirements as a conduit hydroelectric facility.

However, the exemption does not eliminate all FERC involvement in these facilities, it only reduces it. Metropolitan is still subject to what we respectfully submit are unnecessary

inspections and reporting requirements. For example, during a recent two-day inspection at several generating facilities, Metropolitan provided security and maintenance personnel to grant FERC staff on-site access to assess the condition of the facilities and review Metropolitan's hydropower operations. The facilities visited range in size from 2.9 MW to 7.9 MW. Several items were noted during the inspections, including minor leaks around small seals and cooling lines. These items had recently been identified by Metropolitan and repairs were underway or repair parts were on order during the time of the inspection. Metropolitan was instructed to provide plans, schedules or reports on measures to correct the noted items.

Metropolitan has a long-standing commitment to security and reliability of critical infrastructure. Over 19 million people rely on Metropolitan for some or all of their water needs. Every day Metropolitan moves 1.6 billion gallons through its water distribution pipelines, the same pipelines that deliver water to the hydropower generators. Metropolitan has no responsibility more

critical than the safe, reliable delivery of water to the people and businesses of southern California. However, given the small size of the FERC exempted conduit hydropower generators and the isolated role they can have in a water system, Metropolitan questions the value and need of the inspections and the time required from FERC and Metropolitan staff to perform the inspections and the resulting administrative activities.

Metropolitan originally developed its water distribution system without conduit hydropower generators. As the pipelines carrying the water moved from higher elevations to lower elevations, pressure had to be reduced to prevent the failure of the pipeline or eliminate the need for expensive strengthening measures. At certain locations, a pressure reducing structure was built, which housed one or more special valves that could reduce the excess pressure or energy from the water in the pipelines before sending it along to the next segment of pipe.

Recognizing the potential of the energy at these pressure reduction facilities, starting in the late 1970's, Metropolitan began

installing hydropower generators in parallel to the valves. When the conditions are right, water is diverted to the generator turbine to reduce the water pressure and produce electricity; otherwise, the water continues to flow through the pressure reducing valves. The valves are also used when the generator is out of service for maintenance. From a water delivery standpoint, the valves are the primary route to move water to Metropolitan's customers, allowing the uninterrupted delivery of water even if the generator fails while in operation.

Given the critical nature of the pressure reduction facilities and their role in providing safe and reliable water service to southern California, Metropolitan already expends significant resources on the security and maintenance of these facilities, whether or not they contain a hydropower power generator. To impose an additional layer of regulatory oversight simply because there is, specifically, a hydropower generator involved - a different type of generator, such as a photovoltaic system, would not bring

FERC involvement – is burdensome and does not add sufficient value for the extra work involved.

Also, to qualify for a FERC license exemption, the conduit hydropower generator must be relatively small in size which can limit its impact on the local power system. For example, Metropolitan's hydropower generation feeds into the highly developed and robust electrical distribution infrastructure of southern California. The electrical impact of 3 or 4 MW of hydrogeneration to a system serving 20,000 or 30,000 MW of load is basically immaterial. Additionally, the electric utility whose distribution system Metropolitan interconnects its generation into has detailed requirements for such an interconnection to protect the utility's facilities and customers.

In summary, while FERC has always been expeditious in granting licensing exemptions for Metropolitan's conduit hydropower generators, the current protocol for FERC oversight and regulations regarding these exempt generators can unnecessarily increase costs and reduce incentives for the

development of new generators. Metropolitan recommends regulations, as described above, be modified, if not eliminated and other regulations be reviewed for their benefit and value.