



CASE STUDY INTERVIEW 1:

On a Chain of Islands in Washington, an Unlikely Recipe for Broadband Expansion

A talk with

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By

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Orcas Power & Light Cooperative (OPALCO) is a member-owned, nonprofit cooperative utility that has provided energy services to San Juan County in far northwest Washington State since 1937. Delivered to 20 islands in the archipelago by way of submarine cables, the majority of its power is hydro-electric energy generated by Bonneville Power Administration (BPA).

Delivering power and broadband in this topography and environment creates a unique set of challenges. Together with its wholly owned subsidiary, Rock Island Communications, the cooperative has met these challenges with some very creative solutions to bring smart-grid technology and broadband services to its members. John Donner from CoBank's Electric Distribution team met with Foster Hildreth, the chief executive officer of OPALCO, to discuss how the co-op has used a unique combination of partnerships, member contributions and varying technologies to meet the critical needs of its members.

John Donner: What was the initial driver behind your project?

Foster Hildreth: San Juan County was a severely underserved community for modern communications, with sole reliance on a national carrier that made little to no ongoing investment in its infrastructure. As with many co-ops, the very initial driver was a need to better communicate with key grid infrastructure (substations and submarine terminals). Starting in 2000, OPALCO began sharing surplus fiber with larger institutions (public safety, government, schools, libraries) in the county to meet their demand for connectivity. However, a complete failure of an undersea fiber cable belonging to the national carrier disconnected the county for 10 days in November 2013. The immediate impact on emergency management systems, the economy and normal daily life initiated our current course of action.

JD: What was the viewpoint of your board and membership before you started, and has it changed over time?

FH: Yes, it did change over time. We do really see our world as the time before the cable broke versus the time after it. It was a defining moment in the community that brought home the need for self-determination and the broad acknowledgment that we needed to fix our own problems. Relying on others to deliver a critical infrastructure, satisfying cooperative quality and service levels, was not going to happen.

JD: What are the demographics of the area that you serve?

FH: We are an older, seasonally driven economy and demographic. Our service territory has an average age of 52, compared to a Washington State average age of 38. Additionally, 35 percent of the home ownership is part-time/seasonal residents.

JD: Are you providing broadband outside of the electric service territory?

FH: Not currently. However, if a cooperative is facing similar challenges, they can call us. We have had some interest from other communities and may explore replicating our fiber/LTE model in other parts of the county.

JD: What broadband/telecommunications offerings already existed in your marketplace?

FH: The primary offering was DSL internet delivered over an aging copper infrastructure, mixed with minimal cable and satellite. DSL was either provided by the incumbent carrier or resold via local ISPs.

JD: Was there a competitive response to your offering?

FH: We acquired the largest local ISP in an effort to expand our existing customer base and get closer to our subscriber break-even targets right from the beginning.

The incumbent carrier started to upgrade portions of our mutual service area using governmental grants. However, those efforts were short-lived; the cost to upgrade infrastructure in our county is very high and our pricing and baseline service offering is beyond their best capability. Based on substandard service for a number of years, there remains an overwhelming desire from folks to get away from the incumbent.

JD: Did you complete a feasibility study and if so, did you prepare it internally or hire an outside firm?

FH: Over the years a number of studies were performed both internally and externally. The current plan was derived in mid-2014 after hiring a team to define a plan of action.

JD: What technologies are you utilizing?

FH: Our core network is an active Ethernet fiber to the home/premise supplemented with an LTE fixed wireless network. We entered into a long-term partnership with T-Mobile US, whereby we share investment and capability allowing us to offer a private wireless solution using multiple LTE spectrum bands (2, 4 and 12). We do deliver some services via public spectrum WiFi as well as reselling DSL connectivity.

JD: What services are you offering – triple play, broadband only?

FH: We offer broadband and voice service. We do not offer traditional TV, taking the view that if you deliver a superior connection, people will adjust their consumption habits to streaming services. We also offer a full suite of IT services: hosting, email, technology classes, etc.

JD: How are you marketing your services?

FH: We market via the full range of media (print, online, social media, sponsorship, etc.).

JD: Did you hire any new personnel for this project?

FH: Yes, our broadband business has grown to 30 full-time employees since its inception in 2014. We have hired an extremely dedicated and talented group with a wide range of skills including technology, finance, marketing and retail experience. Perfecting our team culture has been one of our largest challenges. Providing internet services is a competitive business and requires a slightly different attitude and sales mentality. We are fortunate to be able to attract talent from all over the United States.

JD: What is your organizational structure? Who holds the broadband assets?

FH: OPALCO is a 100 percent equity owner of Island Network LLC, doing business as Rock Island. OPALCO maintains ownership of our backbone infrastructure, while Rock Island owns all distribution assets installed.

JD: Did you partner with anyone?

FH: As mentioned previously we have a very unique partnership with T-Mobile. We each have access to each other's LTE spectrum. T-Mobile provides Rock Island with a managed virtual network operator (MVNO) arrangement through which we can deliver fixed wireless services.

JD: How are you funding the project?

FH: Operating revenue, loan/line of credit from CoBank and direct investment for construction from property owners. We have also benefitted indirectly from a multimillion-dollar investment in infrastructure by OPALCO and T-Mobile.

JD: Did you collect contributions to aid in construction from your subscribers?

FH: Yes, an average of \$3,500 to \$4,000 per location. Connecting parties organize and fund the cost of construction to bring this utility through their neighborhoods and to their homes. The Rock Island team is actively working with organized groups of homeowners in HOAs, road or water associations, or simply groups of neighbors who come together to share costs.

To help offset the cost of construction, we are offering two types of incentives. The first is a construction incentive of \$1,500 toward the last-mile construction. The second is a discount incentive for those willing to cover their entire construction cost. Rock Island provides a \$20 per month discount on fiber subscriptions for as long as the customer lives at their service address.

JD: Did you encounter any surprises or challenges along the way?

FH: In short, yes, lots of surprises and adjustments along the way. The introduction of T-Mobile was a massive benefit to our ability to quickly deliver a major improvement in services to a large number of customers, especially in remote areas of the county. The continued demand and need we are seeing has been a great surprise. Also, the degree to which we've been able to

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solve the cell coverage gap in our community – thanks to our partnership with T-Mobile US – was a surprise, and the benefits to our electric utility, public safety and our co-op membership are huge.

JD: What is your long-term measurement of the success of this project?

FH: On a practical level, cash-flow positive. On a wider community level, we would like to see growth in the social and economic capabilities of our now “connected” rural community. Our long-term goal is to put a Gig into every building and 100 Mbps into every hand. ■



FOSTER HILDRETH is the general manager at Orcas Power & Light Cooperative (OPALCO), which distributes power to 15,000 meters across the San Juan Islands in far northwest Washington State. A seasoned financial manager, Mr. Hildreth joined the OPALCO team in 2006 and took the reins as general manager in September 2014. In that role, he oversees all of OPALCO's departments and functions, including engineering, business development, accounting and finance controls, reporting and member services, communications, capital projects, and hiring key personnel.

Mr. Hildreth earned his bachelor's degree as well as his master's in business administration and finance from the University of Southern California. He lives on Orcas Island with his wife, two children, their dogs and a flock of chickens.