

ConnectVT

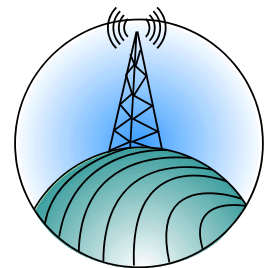
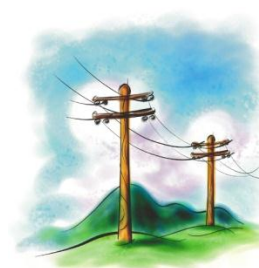
Agency of Administration

Karen L. Marshall

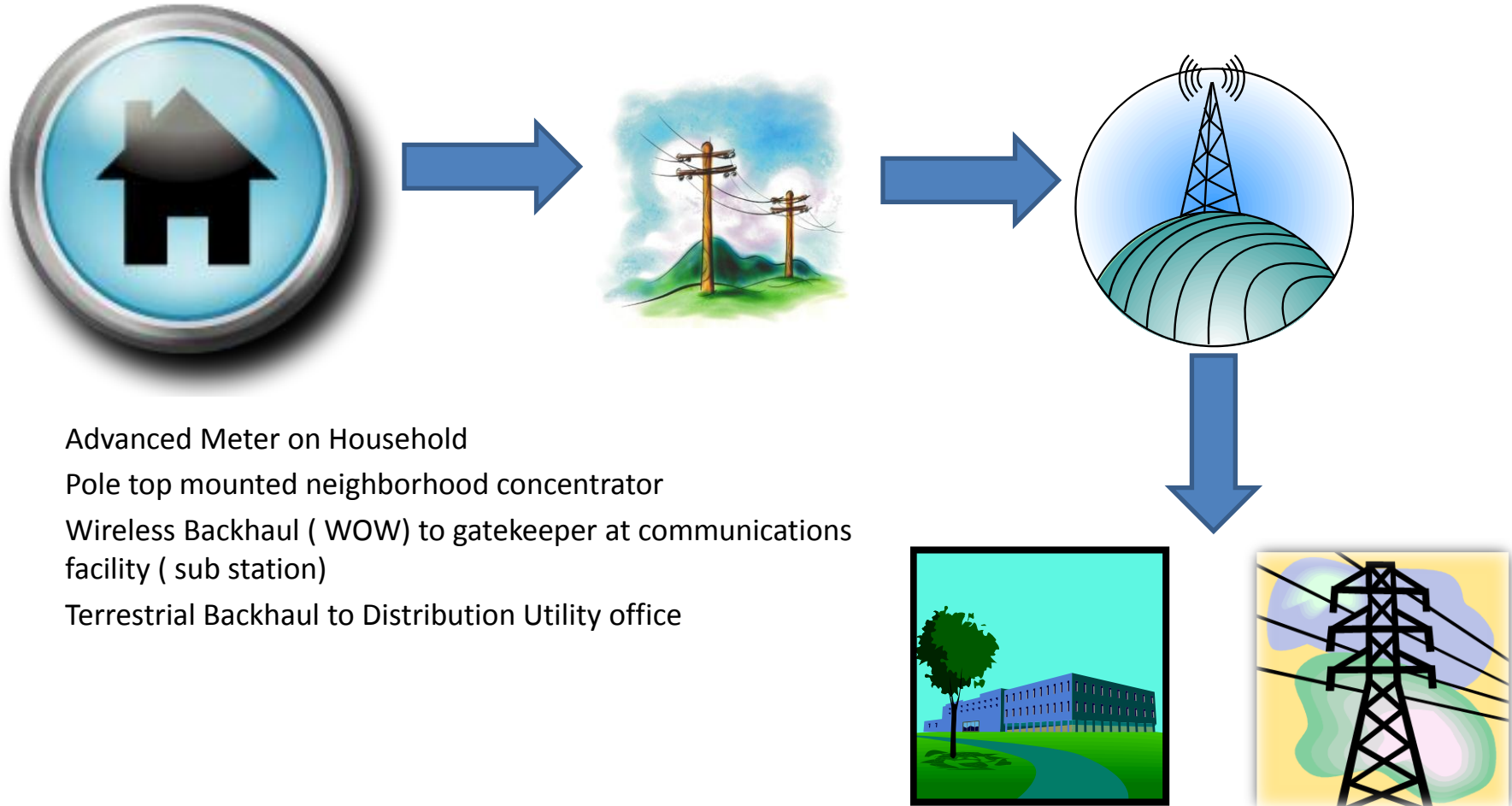
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- strategic plan
- marriage of smart grid and telco
- status update



The Marriage of Vermont's Smart Grid and Telecommunications Infrastructure





Favorable Alignment: Smart Grid and Telco Marriage

The Marriage: Vermont's Smart Grid and telco industries have identified areas where infrastructure can be shared to apply communications technology to our electrical grid. The primary area is the intermediate communications link from AMI to neighborhood concentrators that will be accomplished through wireless backhaul.

- ARRA Funded Projects
 - \$177 Million in middle and last mile telecommunications projects, NTIA and USRDA/RUS funded
 - \$189 Million Smart Grid and reliability projects (ARRA and ISO)
 - Wireless Open World by VTel, deploying 4G LTE technology for consumer wireless broadband, that will simultaneously be utilized for Smart Grid intermediate communications from neighborhood to aggregator-shared and swapped fiber backhaul networks
- 700 MHz C license ownership
- Social and Political Capital
 - Vermont leaders have put their relationships and power to work to achieve desired shared outcomes.
- 2013 deadlines
- Congressional Delegation
- Efficiency Vermont: statewide efficiency utility, leads the nation in understanding and activities
- Vermont Sandia : Sandia views Vermont as a “learning lab” for Smart Grid
- Convergence of adoption strategies: the consumer achieving better outcomes with knowledge





Legislative Summary

The Vermont Legislature passed two bills this session that will contribute to our success in achieving universal broadband and mobile service. S.78 Telecommunications Bill, which substantially enhances our permitting processes for telecommunications installations and compresses time for consideration. H.446 Capital Appropriations Bill, which made an appropriation of \$10 Million to the Vermont Telecommunications Authority in FY 2012 to pursue strategic investments in unserved areas of the state for broadband and target corridors for mobile service.

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- 248A is Vermont's inclusive permitting process for telecommunications installations that grants a certificate of public good and environmental permits. For high elevation installations, projects also pursue a Storm water permit.
 - Finding: "no undue adverse affect on aesthetics, historic sites, air and water purity, natural environment and the public health and safety"
 - Bill establishes 3 tiers of application in 248A:
 - de minimis for installation and change out of radio or antenna equipment on existing structures where there is not significant impact on the structure; increase of up to 75 sqft of surface area , 21 day approval
 - Limited Size and Scope, for build of a tower up to 140 feet or installations greater than 75 sqft, with earth disturbance to 10,000 SQFT for inclusion of access roads; 45 day approval
 - Telecommunications facility, all other applications, decrease to 60 day approval
- Storm water permitting in a 40 general /60 specific day window, a reduced timeframe
- Consolidated appeals of to the Public Service Board versus Environmental Court
- Establishes exemptions from local zoning and bylaws for fiber attachment or replacement, pole replacement, cabinet installations for fiber activities
- Establishes exemptions from Act 250 (environmental permitting) for same, where previously Act 250 could apply to any project over one acre
- Telecommunications planning housed within the Agency of Administration with the VTA focused as the entity that makes strategic investment of public monies in telco infrastructure





Significant Accomplishments

- State of Vermont Agencies agree to form license and process for license/lease of state lands and buildings for the installation of telecommunications equipment. Marketing activities to be coordinated by the VTA.
- FairPoint (ILEC) in build mode to complete upgrades creating the Vantage Network, with speeds at 15 Mbps or > in 51 of their 98 exchanges. Commitment is to be completed by June 30, 2011.
- Pole Attachment meetings convened with all owners/ project owners to pursue project management model, creating greater efficiencies in pole applications and make ready activities. Total fiber projects for Telco and utilities estimated at 3000 miles through 2013.
- Initial meetings in Q1 2011 with cellular carriers indicate that they may consider sites developed by VTA for installations where they will not build.
- Vermont Telecommunications Authority makes three Backroads Broadband Grants to:
 - Vtel for extension of its WOW project into additional unserved areas of the state
 - FairPoint for additional network upgrades in three exchanges
 - Cloud Alliance, WISP, for construction of three additional towers in Hardwick, Woodbury, Wolcott
- EC Fiber begins 24 miles of FTTP, Orange county in central VT; completion targeted for Q3 2011
- WCVT initiates fiber build, NTIA funded
- VT Department of Public Service and FairPoint agree to ALT Reg, returning \$7 Million to FP earmarked for completion of additional Vantage Network exchanges. Under consideration by PSB.
- Governor Shumlin and VCGI/partners launch www.broadbandvt.org, the state's one stop shop for all things broadband for consumers. Site incorporates the state broadband maps. Consumer information program is started in conjunction with Consumer Affairs at DPS.
- VTSHPO joins the team, works diligently with federal agency partners to move EA and programmatic agreements expediently through to sign off..





In Progress

- Service level agreements between Telcos and VELCO (transmission utility) are progressing to establish swapped fiber strands and backhaul that will support both telecommunications and smart grid initiatives.
- VT Department of Libraries is in development stage to establish a statewide WAN and maximize CAI connections to the first 53 libraries, out of a total of 181 across the state.
- Vermont Department of Education awards aggregation activities contract to ENA, Education Networks of America, to work with local schools on a voluntary basis on aggregation of purchase and e rate filing.
- Smart Grid distribution utilities commit to intermediate communications step in advanced metering system as wireless, with Vtel's " to be built" WOW project the cornerstone of communications.
- Smart Grid distribution utilities select vendor for AMI and bid design for a hardened 4G LTE compatible radio that will integrated as the "gatekeeper" instrument.
- VELCO/ Smart Grid reliability fiber ring is 85% planned, 15% completed on 950 mile project
- Sovernet begins pole applications, on final grant of PA from NTIA in early May.
- VTEL s waiting on PA from RUS, comments filed and action promised by May 9.
- SOV ConnectVt developing master project management view and reporting for all telecommunications and smart grid projects through 2013.
- VTA identifies 99 unserved target communities for completion by 2013.
- VTA with VCGI drive testing work identifies 55 target corridors for mobile service by 2013.

