

The Colorado Alpha Project

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Topics

- Background
- Three existing project elements
- Five key field acceptance criteria
- Subsequent project highlights
- Walsenburg epilogue

Background of CO School Wind

- Wray
- Holyoke
- Ovid

Wray CO

- Small town with reputation for “forward thinking”
- Initial 25kW project grew to 660kW, a/c half-price Vestas turbines/towers; w/ delay needed to consider larger size, turbines sold elsewhere
- School teacher champion invited over 24m period to speak about “success” of school wind in Wray
- New local champion; 660kW grew to 2.5mW, and proposal for first-of-its-kind tower
- Six years in
 - No turbine; “possibly 900kW in May '08”
 - Principal “fired over student involved in wind study group”
 - No heroes left standing

Holyoke CO

- Extensive stakeholder interest, incl utility
- 1y monthly of meetings, many project versions
- Principal, the group's leader, pulls plug: no deal a/c payoff > 10y, regardless of who paid
- Three years in
 - No turbine
 - Now new interest by townspeople, but utility and others wary of time investment

Ovid CO

- Very small town, with energetic school board of farmers
- Interested in turbine, but farmers unavailable for long periods; no continuity means re-building information base
- Two years in
 - No turbine
 - May still install one, if we can work with farmers schedules

Walsenburg CO

Three Existing Project Elements

1. Part of competent technical team
 - WfS' Tony Jimenez to serve as engineering lead
 - Still needed construction & curriculum contributions
2. Part of financing
 - Community Energy's donation ("green tags" piece) to buy 100W turbine
 - Still needed cash from school & in-kind help of utility
3. Part of policy
 - WfS' transmittal of wind-benefits policy outline
 - Still needed school to internalize or originate

5 Key Acceptance Criteria

1. Reasonable wind resource?
2. Acceptable site?
3. Community awareness and “pull”?
4. School administration support & understanding of economics?
5. Science teacher prepared to incorporate curriculum and science projects?

Reasonable Wind Resource?

- At Walsenburg, state wind map looked promising; local data confirmed
- 50mW of wind development had been proposed nearby
- The local development interest was our “champion”
- OK

Acceptable Site?

- Vacant field belonged to school
 - Very good access to wind, especially from prevailing directions S and W
- Large multi-purpose school facility (storage, some classes) adjacent to field, separately metered
- OK







Community Awareness & Pull?

- Local champion was very vocal and well entrenched in town network
- School board was supportive
- Local utility, San Isabel, became early supporter
 - Offered trenching, cable, erection, cash contribution
- OK



School Admin: Support/Economics?

- Superintendent and his project manager were at every meeting
 - Wanted to make special arrangements for data collection and presentation
- Super continually assured team he would “bring principal along to the next meeting”
- OK*

Science Teacher Prepared?

- Team expected science teacher to be brought along by principal
- Final curriculum piece was not quite ready, but interim instructional elements would be provided instead

Subsequent Project Highlights

- Cascading communication failures at school
- Guy wires + fence grudgingly approved by super
- School bought tower pipe, SIEA delivered
- School facilities people helped assemble
- Athletic logo added to tail
- SIEA installed trench, cable, service pedestal
- SIEA bucket trucks acted as gin pole
- Final electrical connection made, under protest



















Anomalies

- #2 service cable thickness exceeded capacity of Southwest Wind hardware; resolution – field fixes per Southwest Wind engineers
- Dimensions of guy wires exceeded capacity of utility anchors; resolution – team acquired climbing carabiners and ganged guy wires into them

Walsenburg Epilogue

- Superintendent lost race for co. commissioner, and was replaced as superintendent
- Principal was cool (hostile?) during Facilitator visit to “mend fences;” said nobody at the school knew anything about the turbine
- Principal was then fired by new superintendent for unrelated reasons
- Turbine is “flying,” reducing the school’s energy expense

