



COLORADO WATER RESOURCES &
POWER DEVELOPMENT AUTHORITY

“Greening of the SRF’s”

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Colorado Water Resources and Power Development Authority

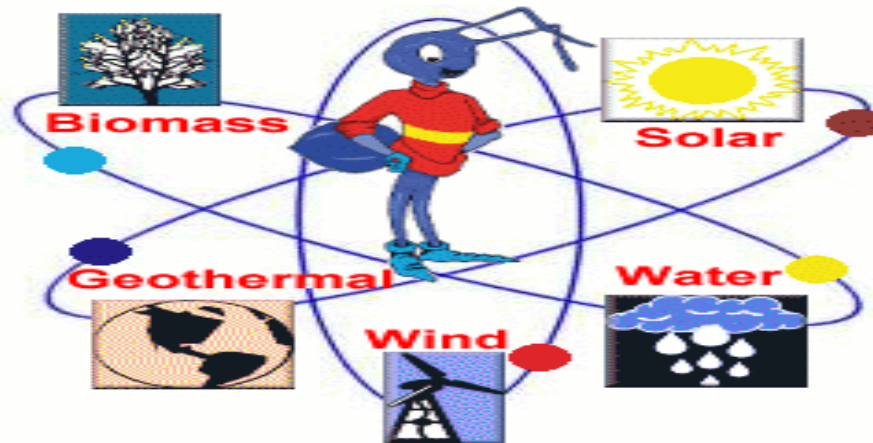


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Colorado's New Energy Economy

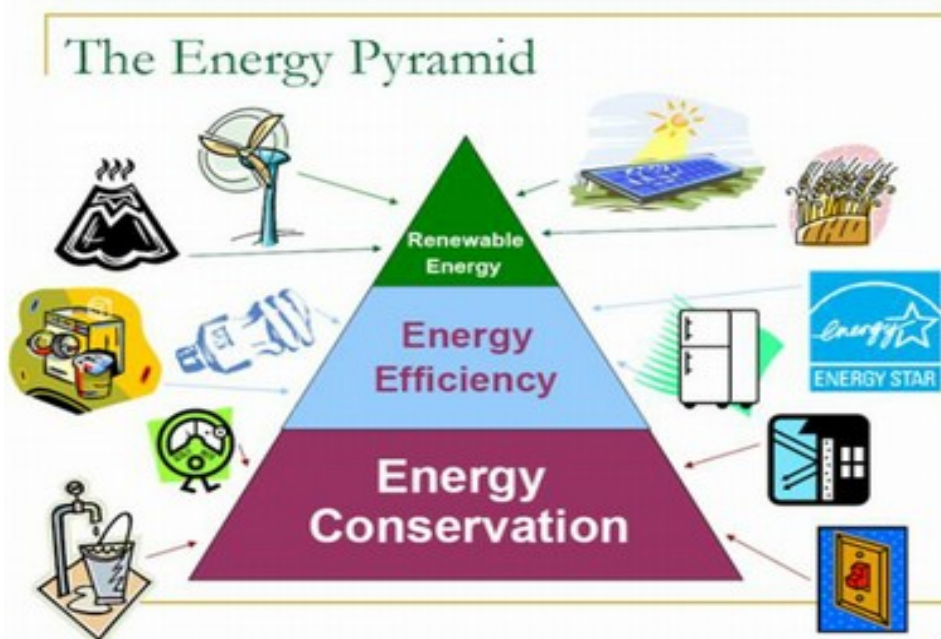
- ▶ In 2007 Governor Bill Ritter re-creates the Governor's Energy Office to lead Colorado to a New Energy Economy by advancing energy efficiency and renewable, clean energy resources.
- ▶ New Energy Economy embraces energy conservation as an important component in our energy future, yet requires a broader mission to meet the goals of expanding renewable and clean energy resources and opportunities for the state's economy, environment and energy independence.





Colorado's Policy and Priority on Energy

- ▶ The hierarchy of actions taken and supported by Colorado is as follows: energy conservation first, then energy efficiency, followed by on-site and utility-scale renewable energy generation, and finally, the purchase of carbon offsets if necessary to reach carbon neutrality.





What can the SRF's do?

- ▶ The CWSRF and DWSRF can fund projects that support energy conservation and energy efficiency (think TME and sustainability).
- ▶ The SRF's can fund projects that incorporate renewable energy generation as a part of the overall project.





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Colorado's DWSRF

Project 7 Water Authority is a an authority that is set up to provide treated drinking water to its seven members at wholesale. The Authority needed to upgrade its water treatment facilities and determined to seek funding from Colorado's DWSRF (\$10,000,000). As part of the facilities the Authority reviewed for upgrade was its raw water transmission line from its terminal reservoir. Currently, because of a substantial drop in elevation the transmission line (gravity fed) has to have an energy dissipation device to reduce the pressure of the water entering the water treatment plant. The Authority and their consulting engineers researched the feasibility of placing a small hydropower unit in the transmission line to convert the high pressure and flow rate into electric energy.





Project Specifics

One, 150 kw/h hydropower generator (estimated cost \$250,000)

Benefits

Serves as necessary energy dissipation device for proper flow control through water treatment plant.

Provides a renewable source of energy for operating the plant.

If more power is generated than needed it will be exported in the utility grid.

Project is estimated to produce approximately 600,000 kw/h per year. The Plant's annual usage is approximately 300,000 kw/h per year.

EPA's opinion is "this sounds like something we would want to encourage, as the onsite/dedicated/green (and thus more sustainable) character of the energy source could be properly described as improving the sustainability of the system".



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