

## AUDIO

## VIDEO

1. Arizona's first experiment with solar technology
2. came during the Apache Indian wars.
3. In the late 1880s, the U.S. Cavalry employed a device called the "heliograph"
4. to establish lines of communication throughout Arizona and New Mexico.
5. Equipped with mirrors and shutters, heliographs flashed Morse Code,
6. in long and short bursts of brilliant light, seen up to 60 miles away.
7. A network of heliograph stations was established on a chain of 27 mountaintops.
8. When Geronimo surrendered, he did so in part because the Apaches were fearful
9. that the cavalry had the power to "make the sun talk."

MUSIC - FC-E8/5 48 secs.

10. The next major solar development was/ a solar-powered steam engine built by /Aubrey G. Eneas in 1904.
11. The Eneas engine had thousands of flat glass mirrors that concentrated the sun's rays on a boiler, /as it tracked the sun across the sky.
12. It was put to work on a farm near Willcox, where on a bright, sunny day, it could pump enough water to irrigate

AUDIO

VIDEO

80 acres of dry, but fertile land.

13. By 1907, the Eneas engine had fallen from favor, as small gasoline engines and electric motors became available.

MUSIC - MHA7-20 39secs.

14. Between the time of the Eneas Engine and World War II, /many Arizonans provided hot water for their homes /by using simple, solar water heaters.

15. Black barrels, mounted on rooftops,/ were filled with water in the morning and, /by the end of the day, /the water was hot enough for bathing /and dish washing.

16. The advent of water heaters fueled by kerosene and natural gas brought a temporary halt /to Arizona's developing, solar water-heating industry.

MUSIC - MHA7-23 38 secs.

17. In 1955 interest in solar energy surged again

18. when the World Conference on Solar Energy was held in Tucson and Phoenix.

19. The agenda included a great exposition of solar exhibits --

20. the most enduring being Bell Laboratories' silicon solar cell,

21. which converted sunlight into electricity.

22. The exposition created a wave of

AUDIO

VIDEO

enthusiasm for solar energy,

23. which has continued to the present day.

MUSIC - MHA7-21 35secs.

24. Modern-day solar pioneers such as  
Barbara Kerr and Sherry Cole,  
inventors of the solar box cooker,

25. John Yellot, solar researcher,

26. Arthur Brown, passive solar architect,

27. and others,

28. have found that Arizona's clear, dry air  
is ideally suited for solar energy  
research, experimentation, development  
and deployment.

MUSIC - FC-E8/12 30 secs.

29. Throughout Arizona's history, inventors  
of solar devices like the heliograph,

30. the Eneas Engine,

31. barrel water-heaters,

32. solar cookers

33. and passive & active solar homes

34. have opened the way to even greater  
accomplishments in solar technology.

35. These individuals will always be  
Arizona's Pioneers In The Sun.

THE END