THE SOLAR REVOLUTION: FROM CONCEPT TO REALITY

Margalana Margarata The renewable energy revolution and all of the culture that surrounds it may seem relatively new, but solar energy has been a topic of conversation for physicists for centuries. 170 YEARS OF PHOTOVOLTAIC TECHNOLOGY

1839 Physicists observe that energy can be converted 1860 to electricity.

Motor developed to run on solar power.

First solar cell patent issued in US.

05 First 1916 06 **Physicists** provide

1966 NASA launches satellite with a 1KW PV array.

experimental proof of

photoelectric effect.

1990s

Countries recognize and subsidize efforts to promote residential solar. **HISTORY'S BRIGHTEST**

solar First cell. composed of selenium wafers, is described.

1900

power solar company founded.

1955 Commercial licenses for silicon PV technologies sold.

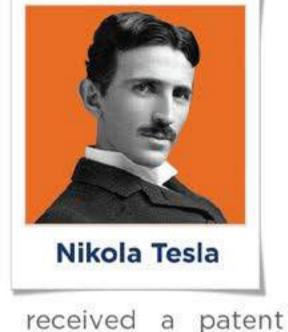
Continued improvements and popularity drive PV costs down.

1980s

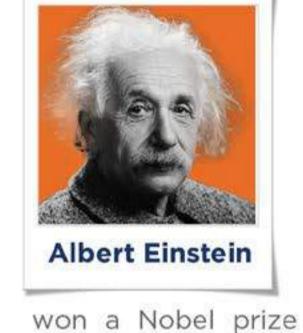
MINDS SUPPORTED SOLAR

07

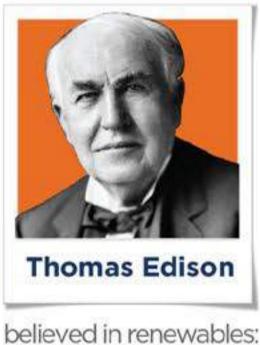
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for solar use in 1901.



for 1904 paper on photoelectric effect.



energy - sun, wind and tide. I'd put my money on the sun and solar energy. What a source of power! I hope we don't have to wait until oil and coal run out before we tackle that." Thomas Edison, 1931

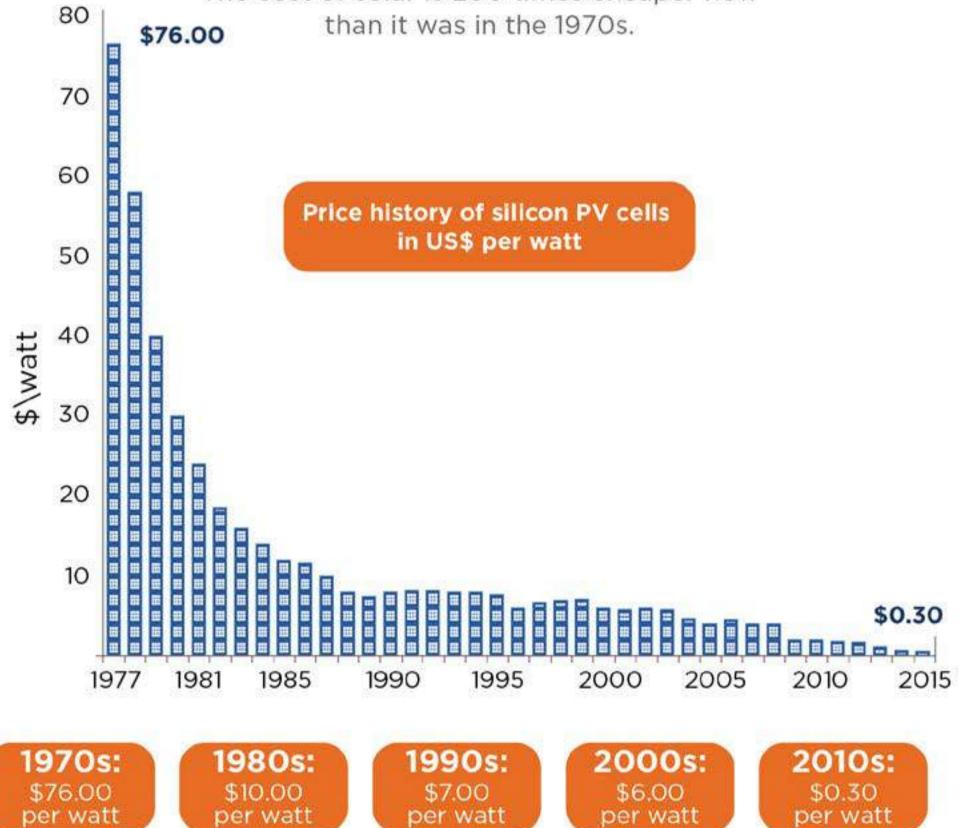
"We should be using nature's inexhaustible sources of

sun has been reignited, accompanied by rapid advances in technology that have made solar energy more affordable and accessible than ever before.

THE SHRINKING COSTS OF

In the past half-century, society's interest in harnessing the power of the

SOLAR THROUGH THE DECADES The cost of solar is 200 times cheaper now



1995

2000

1,400 MW

GLOBAL PHOTOVOLTAIC CAPACITY THROUGH THE YEARS

600 MW

2005 5,400 MW 2010 40,000 MW 2015 233,000 MW 2050

4,600,000 MW (projected)

RESIDENTIAL SOLAR TAKES HOLD IN 21ST CENTURY

The rise of homes in the U.S. with solar installations

2006 30,000 homes

2013 400,000 homes 3,800,000 homes 2020 (projected)



http://www.sunlightelectric.com/pvhistory.php

http://cleantechnica.com/2012/03/21/thomas-edison-for-100-renewable-energy-especially-solar/ http://www.iea.org/publications/freepublications/publication/TechnologyRoadmapSolarPhotovoltaicEnergy_2 014edition.pdf

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