

Coalitional cohesion in technology policy: The case of the early solar cell industry in the United States

make your publications visible.

/ Max-Planck-Institut für Gesellschaftsforschung (MPIfG),

EconStor Köln

/ MPIfG Discussion Paper, Max-Planck-Institut für Gesellschaftsforschung

Please use this identifier to cite or link to this item: <http://hdl.handle.net/10419/162562>

Title:

Coalitional cohesion in technology policy: The case of the early solar cell industry in the United States

Authors:

Ergen, Timur

Year of Publication:

2017

Series/Report no.:

MPIfG Discussion Paper 17/7

Abstract:

The paper traces the rise and decline of solar cell commercialization efforts during the 1970s and early 1980s in the United States. It shows how technology policies for photovoltaic appliances gained and lost support in a time of increasing uncertainty about future resource supplies and the future of energy provision. Contrary to conventional explanations of the long history of failures to commercialize renewable energy technologies that emphasize path dependencies around established energy technologies, this paper explains the rise and decline of early solar cell policies from the perspective of internal sectoral developments. It demonstrates that cohesion among political economic supporters was critical for public perceptions of the intermediary success of the effort, to continuous investment by industry, and to the maintenance of political support. The paper suggests that support for new industries and technologies is dependent on sectoral order among supporting groups over time. The case of the early photovoltaics policies illustrates how the failure to keep groups unified and committed undermined the implementation of the technology policies, weakened the credibility of the developmental effort, and ultimately led to a decline in political support. The paper contributes to recent debates about the conditions of successful industrial and technology policies by demonstrating that network failures have an important political dimension if ruptures of sectoral cooperation feed back on state support for the respective industry or technology.

Abstract (Translated):

Der Aufsatz zeichnet den Aufstieg und Niedergang früher Kommerzialisierungsinitiativen für Solarzellen in den USA während der 1970er- und 1980er-Jahre nach. Er erklärt, warum Förderprogramme für Photovoltaikanlagen in einer Zeit wachsender Unsicherheit über die zukünftige Gestalt von Energieversorgungssystemen Unterstützung erhielten und wieder verloren. Im Unterschied zu konventionellen Erklärungen der Geschichte von Fehlschlägen in der Kommerzialisierung von Solartechnologien, die größtenteils die Beharrungskräfte etablierter Energieerzeugungssysteme herausstellen, fokussiert der Aufsatz interne sektorale Entwicklungen. Er zeigt, dass Kohäsion unter Unterstützern kritisch für die Wahrnehmung der Effektivität der Unterstützungsprogramme, für kontinuierliche Industrieinvestitionen und für die Stabilität staatlicher Förderung war. Der Fall der frühen Photovoltaikprogramme zeigt, dass nachlassender Zusammenhalt unter beteiligten Akteuren die Implementation der Unterstützungsprogramme und die Glaubwürdigkeit des Entwicklungsanlaufs untergraben hat und letztlich zum Abflauen staatlicher Förderung führte. Der Aufsatz trägt zu neueren Debatten über die Bedingungen erfolgreicher Industrie- und Technologiepolitik bei, indem er zeigt, dass industrielle "Netzwerkfehler" eine politische Dimension haben, sobald Unterbrechungen sektoraler Kooperation auf die staatliche Unterstützungsbereitschaft zurückwirken.

Subjects:

technology policy
renewable energy
institutional change
governance
innovation
Technologiepolitik

Persistent Identifier of the first edition:

[hdl:11858/00-001M-0000-002D-6E07-7](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63862-p0011-7)

Document Type:

Working Paper

Appears in Collections:

[MPIfG Discussion Paper, Max-Planck-Institut für Gesellschaftsforschung](#)

Files in This Item:

File	Size
890899428.pdf download file	2.49 MB

[Download Statistics](#)

[BibTeX-Export](#)



Items in EconStor are protected by copyright, with all rights reserved, unless otherwise indicated.

The energy policy of the United States is determined by federal, state, and local entities in the United States, which address issues of energy production, incentives to investment, guidelines for energy conservation, taxation and other public policy techniques. The story of solar cells goes back to an early observation of the photovoltaic effect in 1839. French physicist Alexandre-Edmond Becquerel, son of physicist Antoine Cesar Becquerel and father of physicist Henri Becquerel, was working with metal electrodes in an electrolyte solution when he noticed that small electric currents were produced when the metals were exposed to light, but he couldn't explain the effect. Several decades later, in 1873, Willoughby Smith, an English engineer, discovered the photoconductivity of selenium while testing materials for underwater telegraph cables. In 1883, A The history of coal mining in the United States goes back to the 1300s, when the Hopi Indians used coal. The first commercial use came in 1701, within the Manakin-Sabot area of Richmond, Virginia. Coal was the dominant power source in the United States in the late 1800s and early 1900s, and although in rapid decline it remains a significant source of energy in 2019.

[Contact](#) | [Imprint](#) | [Privacy](#) | [Sitemap](#) | [Deutsch](#)