



Public acceptance of renewables and the media: an analysis of the Spanish PV solar experience

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ABSTRACT

This article addresses the public acceptance issue of renewable energies and, more specifically, the case of photovoltaic (PV) solar energy. The paper analyzes the media coverage that influences public acceptance, focusing on a specific case study: the extraordinary development of the Spanish PV sector during the period 2004–2010, a case that has gained international momentum. The work describes the intense general public debate that has been generated—a debate that may well influence Spanish public acceptance of both this and other sources of renewable energy.

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Abbreviations: PV, photovoltaic; MITyC, Ministry of Industry, Tourism and Commerce; SR, Special Regime; RD, Royal Decree; CNE, [Spanish] National Energy Commission; PER, Plan for the Promotion of Renewable Energy; MW, megawatt; kW, kilowatt; FIT, feed-in tariff; R&D, Research and Development; c€/kWh, euro cents per kilowatt hour; EPIA, European Photovoltaic Industry Association; ASIF, Spanish Photovoltaic Industry Association (Asociación de la Industria Fotovoltaica); EU, European Union; PANER, the National Action Plan for Renewable Energy for the period 2011–2020; CDA, Critical Discourse Analysis; IRR, internal rate of return.

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1. Introduction

Although it may very often be overlooked, social acceptance is one of the most important requirements for the successful adoption of any technology, such as energy infrastructure technologies. More specifically, in specialist literature that has analyzed the complex process involving the adoption of new technologies, special importance is placed on debate, awareness-raising and public acceptance in terms of such social acceptance [1]. Along the same lines, it is pointed out that the way in which the mass media portrays new technology can radically affect how it is received by the public and other stakeholders, as well as decision-makers in government and business [2,3].

In the case of renewable energies and despite the fact that the theoretical importance both of its social acceptance have been highlighted (e.g. [4–7]) and its public acceptance (e.g. [4,8]), these interrelated issues have not been the object of much attention. As a result, there are not many works existing of either a theoretical or empirical nature regarding the perception and public acceptance of these new expanding forms of energy. This is nothing unusual because, as has been highlighted by different authors (e.g. [9–11]), the social and socio-economic aspects linked to the use of renewable energy sources have not been widely studied. Most work to date on social and public acceptance of renewables has focused on particular technologies and projects. For instance, a central issue has been the social acceptance of particular wind energy projects (e.g. [12,13]).

In the specific case of photovoltaic (PV) solar energy, issues regarding social and public acceptance have largely been neglected in literature, perhaps because of the particularly positive public opinion that has tended to prevail with regard to this source of energy. Only in recent times have some contributions started to be made regarding the social aspects of the PV system (e.g. [14,15]). Therefore, in order to make a contribution to this field, this article deals with the issue of public acceptance of PV energy in the case of Spain which, as has already been made clear in specialist publications (e.g. de la Hoz et al. [33]; Salas and Olia [62]), has become well-known throughout the world owing to the major increase in its installed capacity.

The article focuses on an analysis of the media coverage of the aforementioned case study with a view to analyzing the issue of public acceptance of PV. The main specific and interrelated questions that the article aims to address are the following: How has the Spanish press represented the intense evolution of PV energy in the period under consideration? What types of content and perspectives regarding PV energy have prevailed? What are the main frames and types of discourse that have been “generated”?

2. Public acceptance, public debate and media coverage of renewables

From the theoretical standpoint—a very important one for helping to clarify the purpose of the study—Wüstenhagen et al. [8] distinguished three dimensions of social acceptance of renewable energies: socio-political acceptance, community acceptance and market acceptance. Socio-political acceptance refers to the social acceptance on the broadest, most general level, by the public, by key stakeholders and by policy makers. Furthermore, the public acceptance issue is closely linked to those of public perception, debate and attitudes [1]. Along the lines already pointed out for its social acceptance, the specific case of public acceptance of renewable energies has also failed to stand out as an issue that has been taken very much into account [4]. Most stakeholders thought this issue was not a problem for renewable energies, because the first

surveys on the public opinion surrounding them revealed very high levels of support [8,16,17].

Yet research into public acceptance does not just mean research into public opinion. As specialists in this field stress (e.g. [18]), a study of the complex process of public acceptance goes beyond a mere study of public opinion. Advances need to be made in terms of knowledge about the complex social mechanisms regarding acceptance of a type of technology by the public. Among other tasks, the process involving the generation of narrative regarding discourse positions needs to be analyzed, i.e., in the words of Dryzek [19], of the “shared ways of apprehending the world” [p. 8]. In short, as Walker [4] pointed out, the complexity of the task of developing an understanding of “what the public thinks”, and of how attitudes are formed, changed and developed, must not be underestimated in the case of renewable energy. They may be rooted in deep-seated cultural and ideological identities and formed from a variable and interacting mix of influences and sources of information, among which the mass media has a key influence.

From a sociological constructionist approach and with a view to analyzing the construction process of general public debate, the effect of the media on public opinion and public acceptance might also be analyzed [18,20]. From this standpoint, media discourse is an essential context for understanding the formation of public opinion on renewable energies and its public acceptance, since media discourse is part of the process by which individuals construct meaning.

The mass media helps to shape public opinion and the formation of public acceptance in two main ways [2]: firstly, it controls which stories gain the most attention, and the public debate becomes structured in a certain way which is dominated by the issues, viewpoints and perspectives that are reported prominently, with less emphasis being given to those which are not [18]. Secondly, the media convert press releases, events and issues into stories which will grab the public’s attention, and the public debate is also influenced by the manner in which information is interpreted and ‘framed’ [2]. Furthermore, both the potential risks of a new technology and its advantages and disadvantages can be subject to amplification as a consequence of how they are reported in the media—a process known as ‘risk amplification’ [21].

As highlighted in specialist literature, the public accesses knowledge about environmental problems and solutions to a large extent via scientific and technical information that is filtered through mediating institutions, mainly the media itself. These are the ones that reinterpret and adapt scientific and technical contributions according to their different aims, values and interests [22,23]. This is apparent in contributions made by media opinion, but also even in the news. Lowe and Morrison [23] stress the fact that environmental news is not neutral, and the media operates to promote certain views of the world that favour a set of social relationships and ideologies at the expense of other views.

However, as far as is known, this issue has not received the same amount of attention in specialist literature on renewable energies to the same extent as, for instance, investigating how public opinion is influenced by the media has received attention and, more specifically, newspaper coverage (e.g. [22,24]). This is due to the fact that the media has been shown to play a key role in shaping public perceptions and attitudes related to environmental issues [25–27] (Fig. 1).

3. Research context

3.1. Highlights of the PV sector in Spain

Spain, owing to its location and climate, is one of the countries in Europe with the most abundant solar resources [11]. Global solar irradiation on a horizontal plane is estimated as being at between

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