

# A STUDY ON GAINING PUBLIC ACCEPTANCE OF SOLAR OBLIGATION

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## 1. Background and aim

A solar thermal system is very effective in strengthening energy-saving measures in the household sector, because it has about 40-50% energy conversion efficiency which is relatively high as renewable energy and has excellent cost-effectiveness in terms of relatively low installation costs. Moreover, most of the domestic thermal demand is low temperature, which is sufficiently made by solar thermal system. The use of solar thermal had spread all over Japan in the 1980s but it is stagnant in recent years. On the other hand, in Europe the use of solar thermal is increasing greatly which is mainly caused by solar obligation. However, regulations for solar obligation is regulation forcing citizens (building owners) to bear the economic burden that makes it difficult to gain public acceptance.

The purpose of this study was to clarify how to gain public acceptance for the introduction and operation of solar obligation using the case of Baden-Württemberg.

## 2. Solar Obligation

Solar obligations are regulations requiring a minimum share of the heating demand be covered by renewable energy in new buildings as well as existing buildings. It usually applies when a new building is built, or when an existing building is undergoing major renovation and sometimes in the case of replacement of the heating system. At least over 20 countries and regions have introduced solar obligation at present.

The German state Baden-Württemberg started solar obligation for new buildings in 2008 by establishing the state law “the Renewable Thermal Law (Erneuerbare-Wärme-Gesetz)” which was for the first time in Germany. Baden-Württemberg started solar obligation for existing buildings from 2010, because the German federal government started solar obligation in 2009. In this study, the citizens’ evaluation of operating solar obligation and its current problems were generated from the state-published experience report (Erfahrungsbericht) and from interview conducted to state staff, and the positive factors for getting public acceptance were clarified from them.

## 3. Results and discussions

It is found that some assistant factors contribute to smooth introduction and operation of solar obligation. The following six points play an important role on gaining public acceptance. 1)Setting financial support systems which can reduce citizen’s economic burden, 2) establishing Ansprechpartner (contact person) which enables appropriate information services to citizens and government cooperation, 3)the mandate for public buildings, 4)the diversity of implementation measures, 5)information services, and 6)the specialized energy agency with consulting services for citizens. Most of these factors are not yet ready in Japan. Each government needs to prepare these factors from the stage of introduction of solar obligation.