

HOW TO IMPROVE THE PUBLIC PERCEPTION OF HYDROGEN ?

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1. Introduction

In order to provide a first basis to the AIDHY project, (the objective of which is to improve the public acceptance of hydrogen as an energy vector and is supported by the French *Agence Nationale de la Recherche*),

the AFH2 has realized two opinion polls,

the obtained results have been compared with published opinion polls in various countries,

In conclusion, we provide a few recommendations in order to improve the public acceptance of hydrogen.

2. Two opinions polls realized by the AFH2

The AFH2 (*Association Française de l'Hydrogène*) has realized two opinion polls, during year 2008.

The first one, during the fair of Transports and sustainable mobility, during September, in the gardens of Trocadéro

The second, on the occasion of the exhibition for equipment, technologies and services of environment (Pollutec), in Lyon, during December.

We will present the notable results of these two polls

2. Two opinions polls realized by the AFH2 : notables points

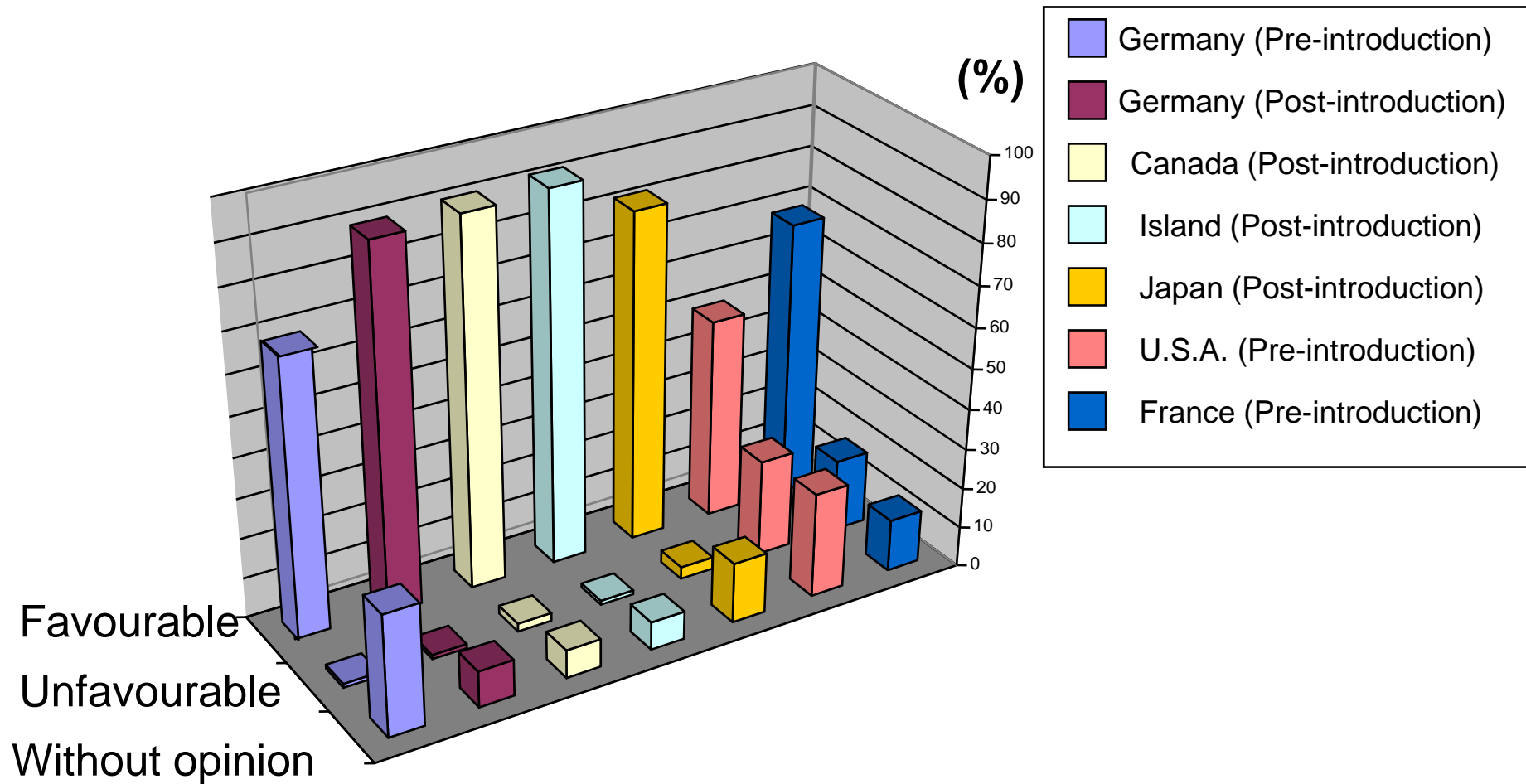
- The use, by the past of hydrogen is ignored of the public. In practice nobody knows the two main components of the ancient city gas: hydrogen and monoxide of carbon.
- The massive production of hydrogen by electrolysis from electricity produced without CO₂ emission is predominantly considered possible for 2040, and satisfactory for most the persons having this point of view.
- The use of hydrogen in transport should be the most developing in 2040, followed by the storage of the energy.
- Most of the people think, that in France, the information on technologies of hydrogen is not sufficient.

3. Synthesis of opinion polls in various countries

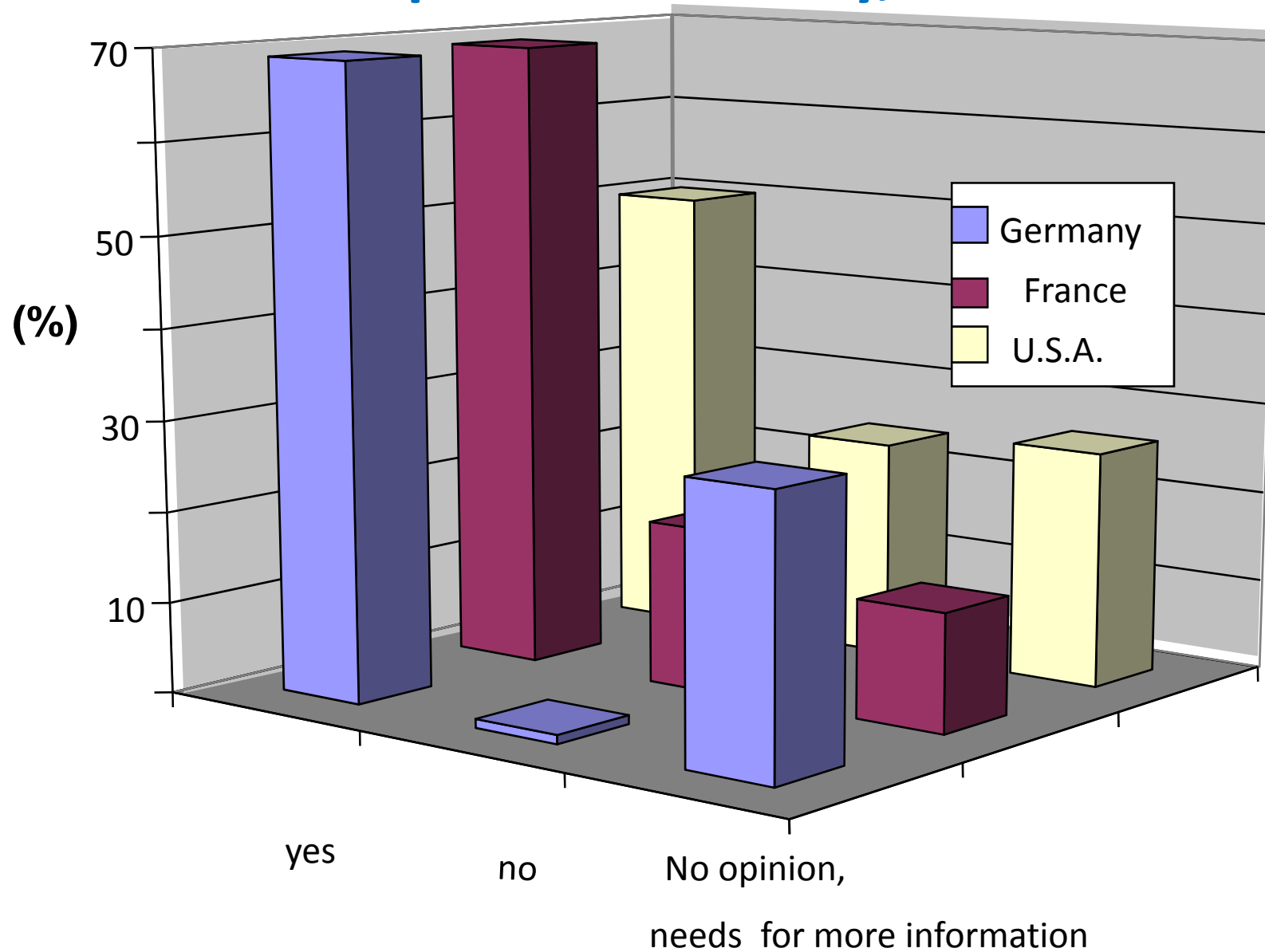
In the open literature, results of some opinion polls are available, which have been performed in *USA, Canada, Japan, Germany, Island....*

- Sometimes, questionnaires have been submitted to people at the occurrence of demonstration programs in relation with the use of hydrogen energy (generally hydrogen buses), in the following, there will be called post-introduction polls.
- In some other cases, questionnaires have been proposed independently of demonstration programs, i.e. to people that never were confronted to hydrogen vehicles, for this reason, we will make mention of pre-introduction opinion polls.

Opinions related to the introduction of the fuel cells

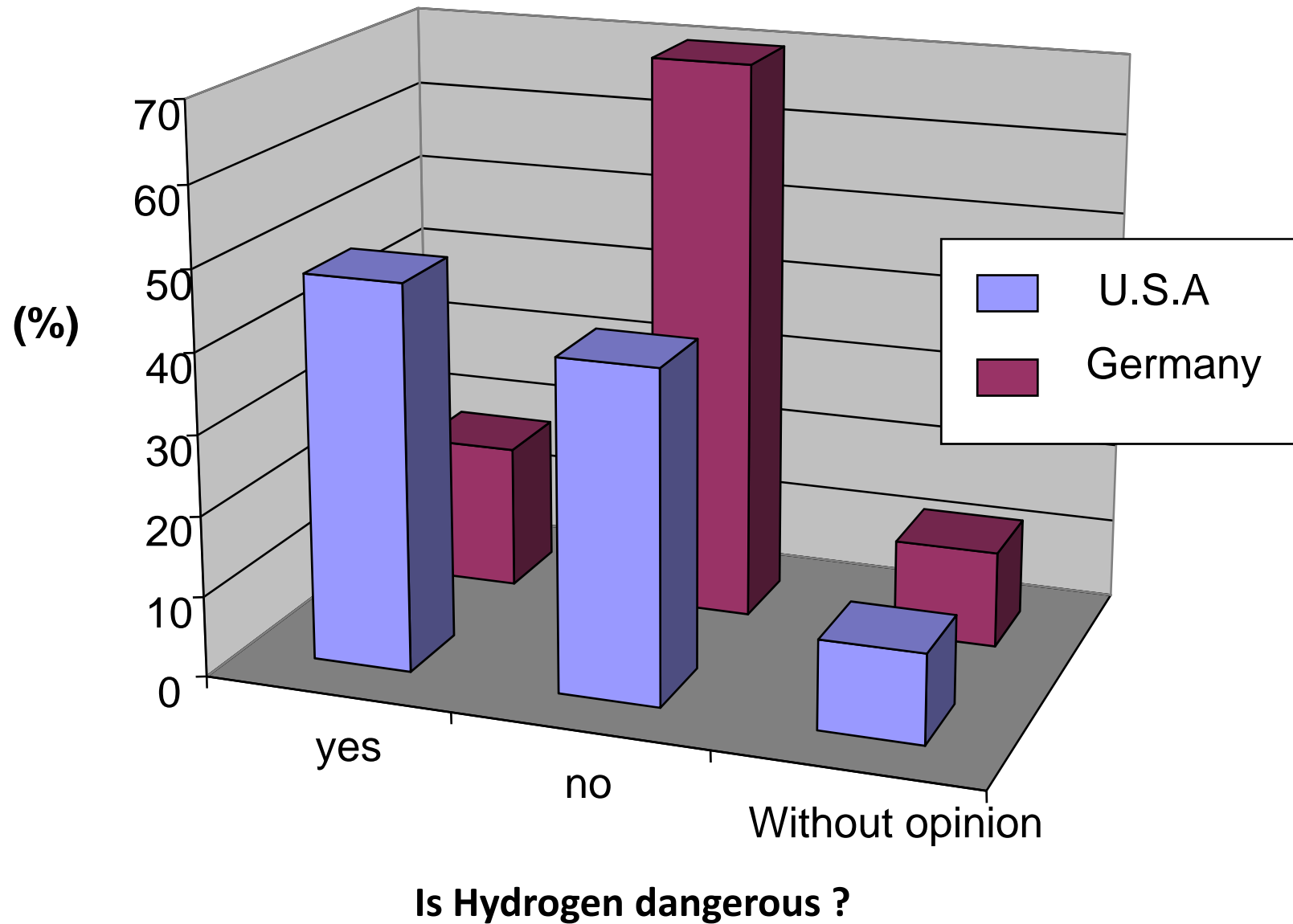


Pre-introduction polls in Germany, U.S.A. and France

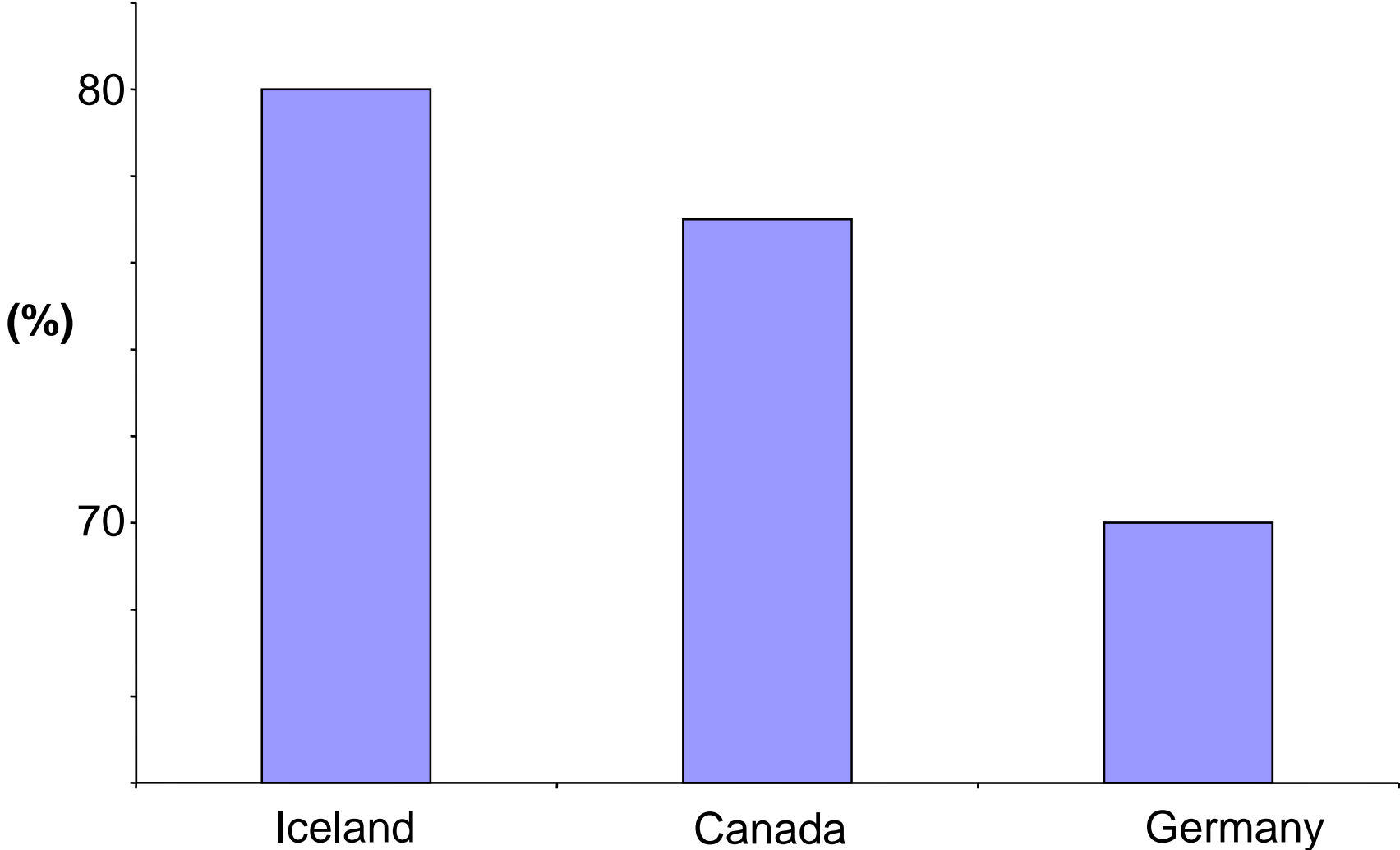


Public acceptance for pre-introduction polls.

Pre-introduction polls in U.S.A. and Germany

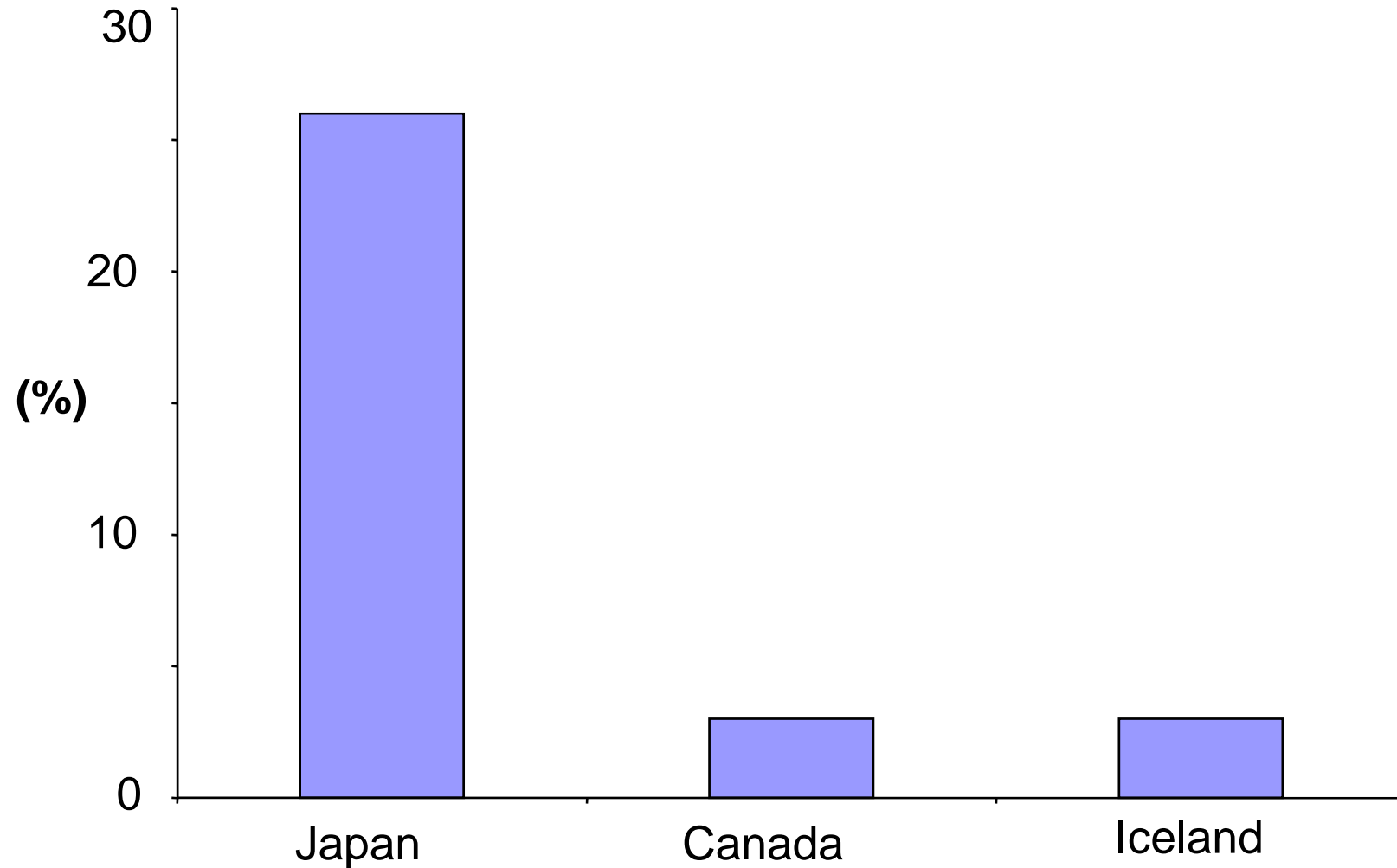


Post-introduction polls in Germany, Canada and Iceland



Public acceptance for H2 BUSES

Post-introduction polls in Japan, Canada and Iceland



Is Hydrogen dangerous ?

4. Conclusion

It appeared that:

- the acceptance of people is better when people had the opportunity to test hydrogen at the occurrence of demonstration programs;
- The ecological advantage is often advanced.
- The fact that at present, the hydrogen is mainly produced by reforming of the fossil resources is greatly ignored.
- The risk of explosion is an argument against the hydrogen,

but almost nobody remembers that the hydrogen was distributed in cities during more than a century as a major component of the synthesis gas, produced from the coal and used for the lighting and the cooking of food.

Recommendations

We recommend not limiting the information about the hydrogen to the end uses of bus and cars working with fuel cells,

but to extend it to the past and present uses of hydrogen,

as well as to the other aspects of the chains from production to end uses, with a particular care for the ecological processes of production of hydrogen, without greenhouse gas emission.