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Supplementary materials

Informed Citizen Panels on the Swiss Electricity Mix 2035: Longer-Term Evolution of Citizen Preferences and Affect in Two Cities

Alexane Dubois [1,†], Simona Holzer [1,†], Georgios Xexakis [1,*], Julia Cousse [1,2] and Evelina Trutnevyte [1]

[1] Renewable Energy Systems, Institute for Environmental Sciences, Section of Earth and Environmental Sciences, University of Geneva, Blvd. Carl Vogt 66, 1211 Geneva, Switzerland; Alexane.Dubois@etu.unige.ch (A.D.); Simona.Holzer@etu.unige.ch (S.H.); julia.cousse@unisg.ch (J.C.); Evelina.Trutnevyte@unige.ch (E.T.)

[2] Institute for Economy and the Environment, University of St. Gallen, Rosenbergstr. 51, 9000 St. Gallen, Switzerland

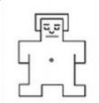
* Correspondence: georgios.xexakis@unige.ch; Tel.: +41-22-379-02-88

† These two authors contributed equally to this article.

Table S1. Question on image associations and affective evaluations of image associations (e.g. hydropower)

b) What are your feelings about the thoughts you mentioned before about hydropower?							
a) What are the first images or thoughts (minimum 1, maximum 3) that come to your mind when you think about hydropower?	Very negative						Very positive
1. *First thought: .....*	○	○	○	○	○	○	○
2. *Second thought: ....*	○	○	○	○	○	○	○
3. *Third thought: ....*	○	○	○	○	○	○	○

Table S2. Question on affective evaluations of the impacts of electricity generation

The electricity generation technologies mentioned above all have negative effects on several levels. How do you feel when you think about the following impacts of different technologies?									
Please use the scale below to describe your feelings. At one end of the scale, you feel completely relaxed, calm while at the other end of the scale you feel restless, tense or excited about the different impacts. The scale also allows you to choose intermediate feelings (between the figures). Please specify your feelings for each of the impacts separately.									
1 *Impact on climate change*	○	○	○	○	○	○	○	○	○
2 *Impact on air quality*	○	○	○	○	○	○	○	○	○
3 *Impacts on water quality*	○	○	○	○	○	○	○	○	○
4 *Land usage and impact on landscape*	○	○	○	○	○	○	○	○	○
5 *Impact on biodiversity*	○	○	○	○	○	○	○	○	○
6 *Accidents and risks related to technologies*	○	○	○	○	○	○	○	○	○
7 *Raw material production and waste management*	○	○	○	○	○	○	○	○	○
8 *Electricity costs*	○	○	○	○	○	○	○	○	○
9 *Security of energy supply*	○	○	○	○	○	○	○	○	○

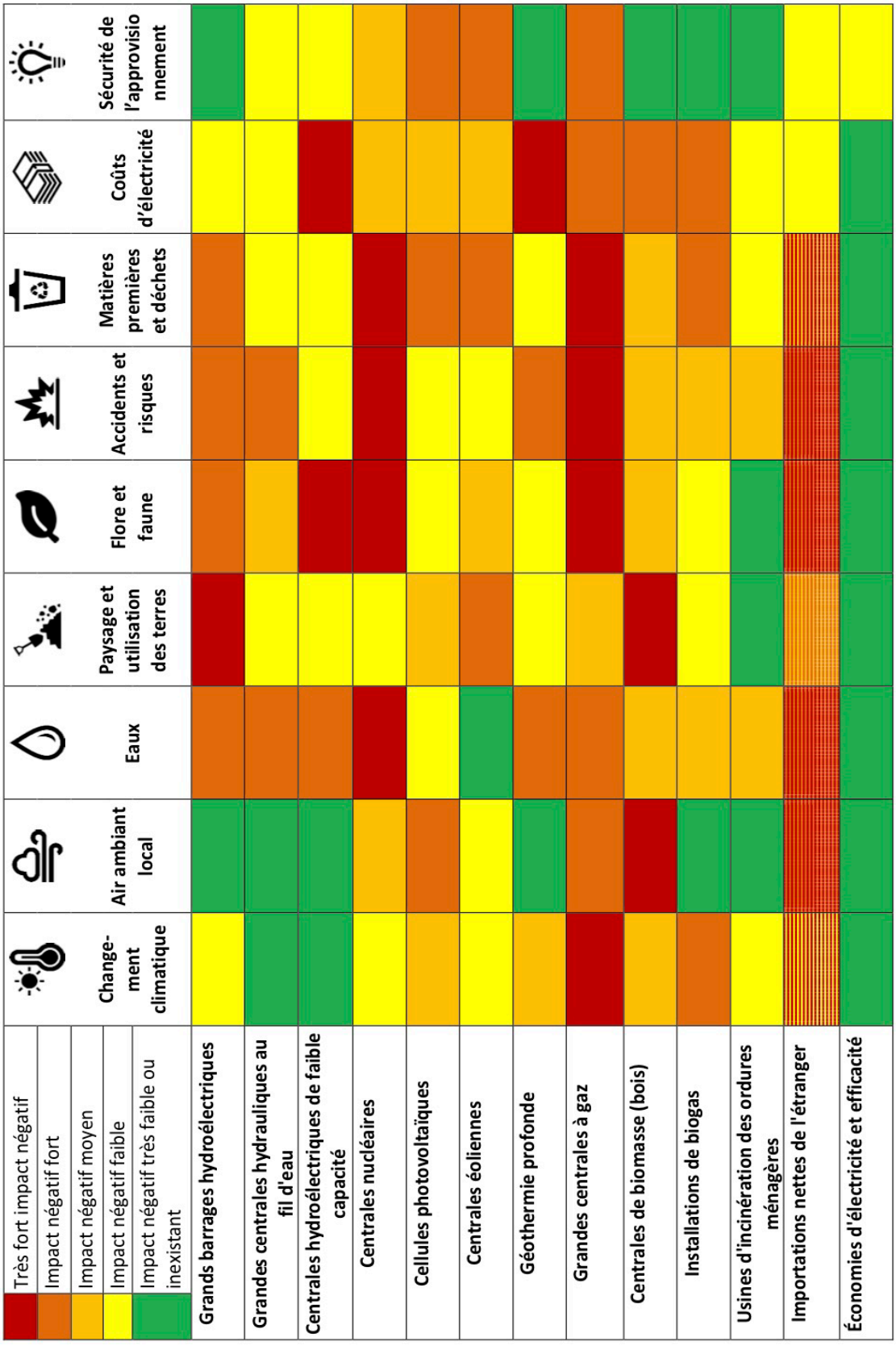


Figure 1. summarizing the severity of the impacts for each technology using a 5-color scale (green = weak or inexistent negative impact, red = strong negative impact). The table is reprinted from Trutnevyte et al. [1].

Table 3. Correlations between preferences for individual electricity generation technologies and affective evaluations of image associations.

Correlation between individual technologies and affective evaluation of image association	Pearson correlation Coefficients (r) survey #1	survey #3 survey #5	survey #7
Hydropower	.296	.277	.322
Nuclear	.617**	.528**	.665***
Solar cells	.523**	.640***	.365*
Wind power	.559**	.527**	.497**
Deep geothermal	.745***	.632***	.190
Large gas power plans	.500*	.531**	.125
Woody biomass	.709***	.717***	.342
Biogas	.636**	.126	.214
Waste incineration	.786***	.403*	−.047
Electricity savings and efficiency	.266	.332	−.075

*p < 0.05, **p < 0.01 and ***p < 0.001

Table 4. Average mix preferences of the informed citizen panel before and after discussion during the workshops.

Individual Technologies	Before Discussion		After Discussion	
	Contribution to Mix (TWh)	Used Potential (%)	Contribution to Mix (TWh)	Used Potential (%)
Large hydro dams	20.3 ± 1.1	46%	20.5 ± 1.1	54%
Large run-of-river hydropower	19.2 ± 1.1	65%	19.3 ± 1.1	69%
Small hydropower	4.6 ± 0.9	50%	4.7 ± 0.9	53%
Nuclear	2.1 ± 4.2	8%	1.6 ± 4.1	6%
Solar cells	10.8 ± 3.6	57%	11.7 ± 3.5	63%
Wind power	2.3 ± 1.2	55%	2.3 ± 1.2	57%
Deep geothermal	1.3 ± 1.5	29%	1.1 ± 1.5	26%
Large gas power plants	0.6 ± 1.7	2%	0.4 ± 1.5	2%
Woody biomass	0.5 ± 0.3	28%	0.4 ± 0.3	25%
Biogas	09 ± 0.4	44%	0.8 ± 0.5	44%
Waste incineration	2.9 ± 0.5	54%	3.0 ± 0.5	66%
Net import	1.0 ± 2.2	5%	0.6 ± 0.8	3%
Electricity savings and efficiency	5.1 ± 2.1	76 %	5.8 ± 1.7	85%

References

1. Trutnevyte, E.; Volken, S.; Xexakis, G., *Factsheets of electricity generation technologies in Switzerland: Technical characteristics, resource potentials, environmental, health and economic impacts.* Zenodo. Available online: http://doi.org/10.5281/zenodo.2556569 (accessed on 5 November 2019).