

Supplementary materials



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

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

b) What are your feelings about the thoughts	you mentior	ned be	efore	abou	ıt hy	drop	ower?
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:	0	0	0	0	0	0	0
2. Second thought:	0	0	0	0	0	0	0
3. Third thought:	0	0	0	0	0	0	0

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).

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Please specify your feelings for each	n	(I)		(III)				ູ ໂດ) [°]
of the impacts separately.	[L Q L		4 @ H]	1	TON"
······································	1								WES.
1 Impact on climate change	0	0	0	\circ	0	0	0	0	0
1 0	-	Ŭ	•	0	Ŭ	Ŭ	Ŭ	-	
2 Impact on air quality	0	0	0	0	0	0	0	0	0
3 Impacts on water quality	0	0	0	0	0	0	0	0	0
4 Land usage and impact on landscape	0	0	0	0	0	0	0	0	0
5 Impact on biodiversity	0	0	0	0	0	0	0	0	0
6 Accidents and risks related to technologies	0	0	0	0	0	0	0	0	0
7 Raw material production and waste management	0	0	0	0	0	0	0	0	0
8 Electricity costs	0	0	0	0	0	0	0	0	0
9 Security of energy supply	0	0	0	0	0	0	0	0	0

Tre	Très fort impact négatif	U,	Ś	<	~	٦	7	13	Ŷ	Ç
<u></u>	Impact négatif fort	۲	JC	Э	ŝ			0		
<u></u>	Impact négatif moyen	;	5							
<u></u>	Impact négatif faible	Change-	Air ambiant		Paysage et	Flore et	Accidents et	Matières	Coûts	Sécurité de Paparovisio
ш. Щ	Impact négatif très faible ou inexistant	climatique	local	Edux	des terres	faune	risques		d'électricité	
Grand	Grands barrages hydroélectriques									
Grande	Grandes centrales hydrauliques au fil d'eau									
Central	Centrales hydroélectriques de faible capacité									
	Centrales nucléaires									
Ŭ	Cellules photovoltaïques									
	Centrales éoliennes									
	Géothermie profonde									
6	Grandes centrales à gaz									
Cent	Centrales de biomasse (bois)									
	Installations de biogas									
Usines	Usines d'incinération des ordures ménagères									
Impor	Importations nettes de l'étranger									
Éconorr	Économies d'électricité et efficacité									

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].

		rson correla oefficients	
Correlation between individual technologies and affective evaluation of image association	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 < 0.0	001		

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

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Tre direct days 1	Before Disc	cussion	After Disc	ussion
Individual	Contribution to	Used	Contribution to	Used
Technologies	Mix (TWh)	Potential (%)	Mix (TWh)	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%

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

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).



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