



JASM Resources

Adriana Marcucci, Ingmar Schlecht, Theodoros Damartzis, Vanessa Burg, Tilman Schildhauer, Gianfranco Guidati

JASM meeting, 15.12.2020



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra



Swiss Confederation

Innosuisse – Swiss Innovation Agency

Future potentials

- Solar PV: Maximum potential of 50 TWh/a
- Wind: Maximum potential of 1.7–4.3 TWh/a
- Hydropower: 36 TWh/a (SCCER-SOE):

Impact category	Change in TWh/a		
	Pessimistic	Medium	Optimistic
Increased residual flows	-3.6	-2.3	-1.9
Measures to protect fish migration	-1.0	-0.4	-0.2
Refurbishment of existing plants	+0.4	+0.8	+2.0
New plants	+1.1	+2.3	+3.1
Total	-3.1	+0.4	+3.0

Hydropower: Climate change

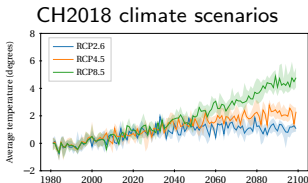


University of Basel



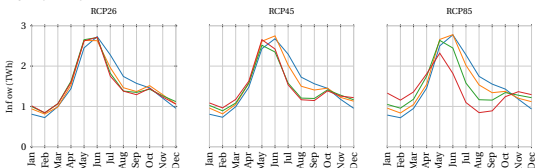
→ Hydropower inflows (UniBasel - Swissmod)

Run-of-river

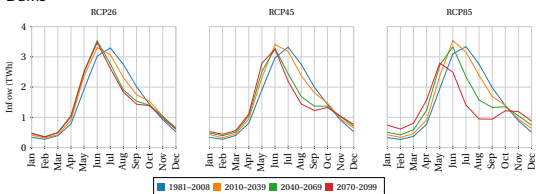


↓
Hydrology (WSL)

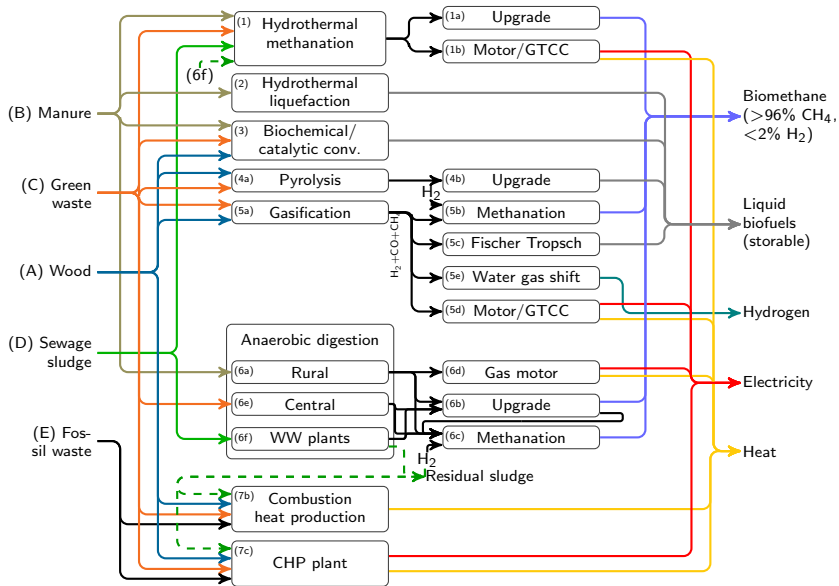
Run-of-river



Dams



Biomass



Category	Feedstock	Energy Potential (PJ)									
		2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
(A) Wood	Forest wood										
	Scenario (1)	17.1	20.1	23.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
	Scenario (2)	17.1	22.2	27.2	32.3	32.3	32.3	32.3	32.3	32.3	32.3
	Scenario (3)	17.1	24.5	31.9	39.4	39.4	39.4	39.4	39.4	39.4	39.4
	Wood from landscape	2.3	3.2	4.0	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	Wood residues	7.4	7.5	7.6	7.7	7.7	7.7	7.7	7.7	7.7	7.7
	Waste wood	9.1	11.1	13.2	15.3	15.9	16.3	16.6	17.0	17.3	17.6
(B) Manure	Animal manure (dry)	2.5	10.5	18.4	26.3	26.3	26.3	26.3	26.3	26.3	26.3
(C) Green waste	Collected organic waste	3.3	3.9	4.6	5.4	6.2	7.1	8.1	9.1	10.1	11.2
	Agricultural byproducts	0.1	0.9	1.8	2.6	2.6	2.6	2.6	2.6	2.6	2.6
(D) Sewage sludge	Fresh sewage sludge (dry)	4.9	5.1	5.3	5.5	5.7	5.8	6.0	6.1	6.2	6.3
(E) Mixed fossil/ organic waste	Imports	4.2	2.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Export	5.9	3.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other waste fraction	22.8	24.7	27.3	29.8	31.6	33.1	34.5	35.9	37.1	38.5
	Municipal waste	31.4	30.9	31.4	31.9	32.1	32.1	31.9	31.7	31.3	30.9
	<i>including green waste</i>	<i>2.8</i>	<i>2.5</i>	<i>2.4</i>	<i>2.2</i>	<i>2</i>	<i>1.7</i>	<i>1.5</i>	<i>1.2</i>	<i>0.9</i>	<i>0.6</i>



Thank you for your attention

Visit us on <https://sccer-jasm.ch>



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Innosuisse – Swiss Innovation Agency