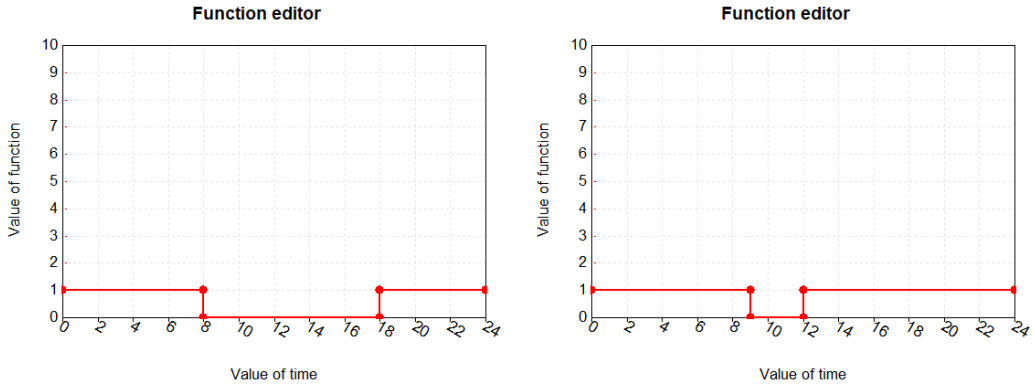
（2）Vehicles

Transportation energy consumption: 6 kg H_2 supports a cruise distance of 690 km

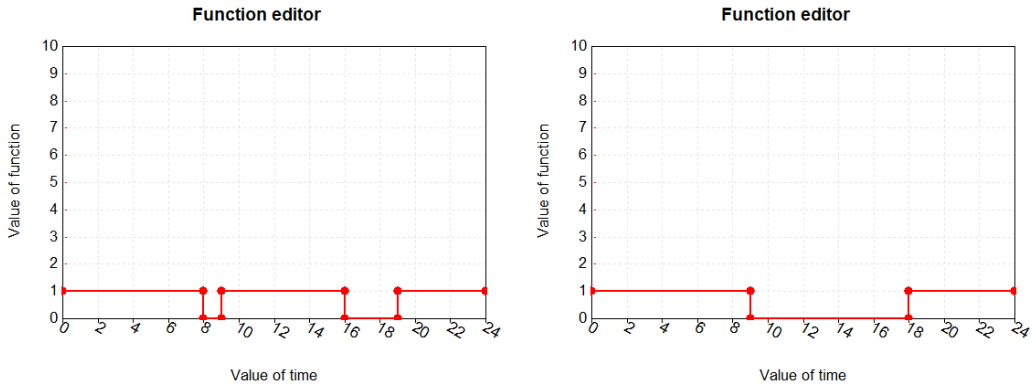
Daily travel distances: 50±5 km (Vehicle 1), 40±4 km (Vehicle 2), 30±3 km (Vehicle 3)

Vehicle parking schedules (1 for parking near buildings, 0 for leaving buildings):

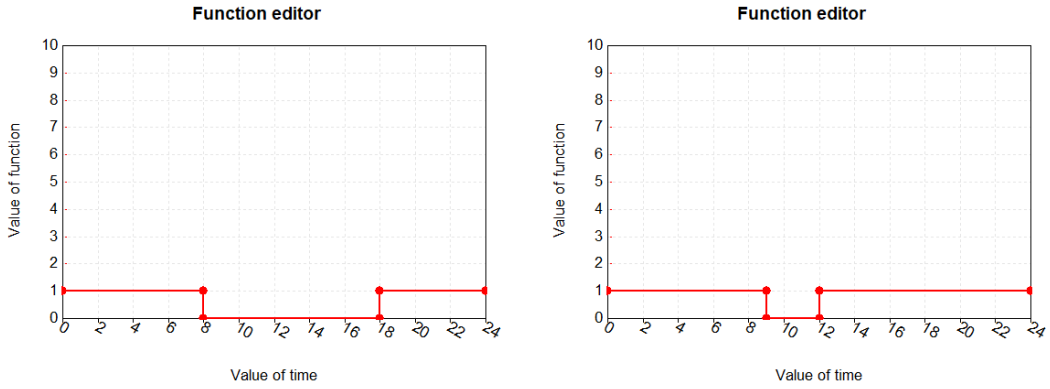
Vehicle 1 (left: weekdays + right: weekends):



Vehicle 2 (left: weekdays + right: weekends):



Vehicle 3 (left: weekdays + right: weekends):



(3) FC

Parameters:

	Name	Value	Unit	More	Macro
2	Temperature mode	2	-	More...	☑
3	Number of cells in series per stack	**80**	-	More...	☑
4	Numboer stacks in parallel per module	**20**	-	More...	☑
5	Electrode area	**500**	cm^2	More...	☑
6	PEM thickness	0.0118	cm	More...	☑
7	Transport number for water	0.0	-	More...	☑
8	Minimum allowable cell voltage	0.7	V	More...	☑
9	Maximum allowable cell current density	**1000**	mA/cm^2	More...	☑
10	Resistance and capcitance calculation mode	1	-	More...	☑
11	Stack to ambient convection coefficient	40	W/m^2.K	More...	☑
12	Cross sectional area of a single cell	441	cm^2	More...	☑
13	Thickness of a single cell	1	cm	More...	☑

Variables:

	Name	Value	Unit	More	Macro
1	Control signal	1	-	More...	☑
2	Current required from fuel cell	100	amperes	More...	☑
3	Stack set point temperature	80	C	More...	☑
4	Hydrogen inlet pressure	3.068	BAR	More...	☑
5	Oxygen inlet pressure	3.068	BAR	More...	☑
6	Hydrogen stoichiometric ratio	1.15	-	More...	☑
7	Oxygen stoichiometric ratio	2.5	-	More...	☑
8	Ambient temperature	40	C	More...	☑
9	Cooling water inlet temperature	Temp_coolant_inlet	**variable name**	More...	☑
10	Cooling water temperature rise	30	C	More...	☑
11	Process water evaporation rate	0.25	-	More...	☑

(4) H2 tanks

Parameters:

	Name	Value	Unit	More	Macro
1	Pressure mode	2	-	More...	☑
2	Maximum pressure	**700**	bar	More...	☑
3	Tank volume	**TankCap_m3**	**variable name**	More...	☑
4	Molar weight of gas	2.016	any	More...	☑
5	Gas critical temperature	-240	C	More...	☑
6	Gas critical pressure	12.9	-	More...	☑

Variables:

		Name	Value	Unit	More	Macro
1		Volumetric rate of gas entering the tank	5	m^3/hr	More...	☑
2		Volumetric rate of gas exiting the tank	10	m^3/hr	More...	☑
3		Gas temperature	20	C	More...	☑
4		Initial pressure level	0.1	-	More...	☑

(5) H2 station

Designed daily charging amount: 100~800 kg H2

Hourly charging amount: 10±5 ~ 80±40 kg H2/h

Onsite-renewable-produce H2 storage capacity: 1000 kg (assumed)