



copert **street**
Level
MANAGING STREET EMISSIONS



Software characteristics

- COPERT hot emission calculation methodology
- Predefined fleet composition for EU countries

- User input data file
- Fast execution

- Stand alone software application
- Works alongside traffic analysis tools



COPERT vs COPERT Street Level

	COPERT	COPERT street level
Minimum temporal level	Year	Hour
Minimum spatial level	City	Small road
GIS visualization	No	Yes
Emissions covered	Regulated and Non Regulated pollutants, GHG	Regulated and Non Regulated pollutants, GHG
Energy consumption calculation	Yes	Yes
Automated scenario execution	No	Yes
Advanced input data	No	Yes

Input data

- Vehicle volume
 - no of vehicles
 - PCU
- Road segment length
- Average road segment vehicle speed

Optional

- GIS information
- Road segment category
- Time (hourly information)



Output data

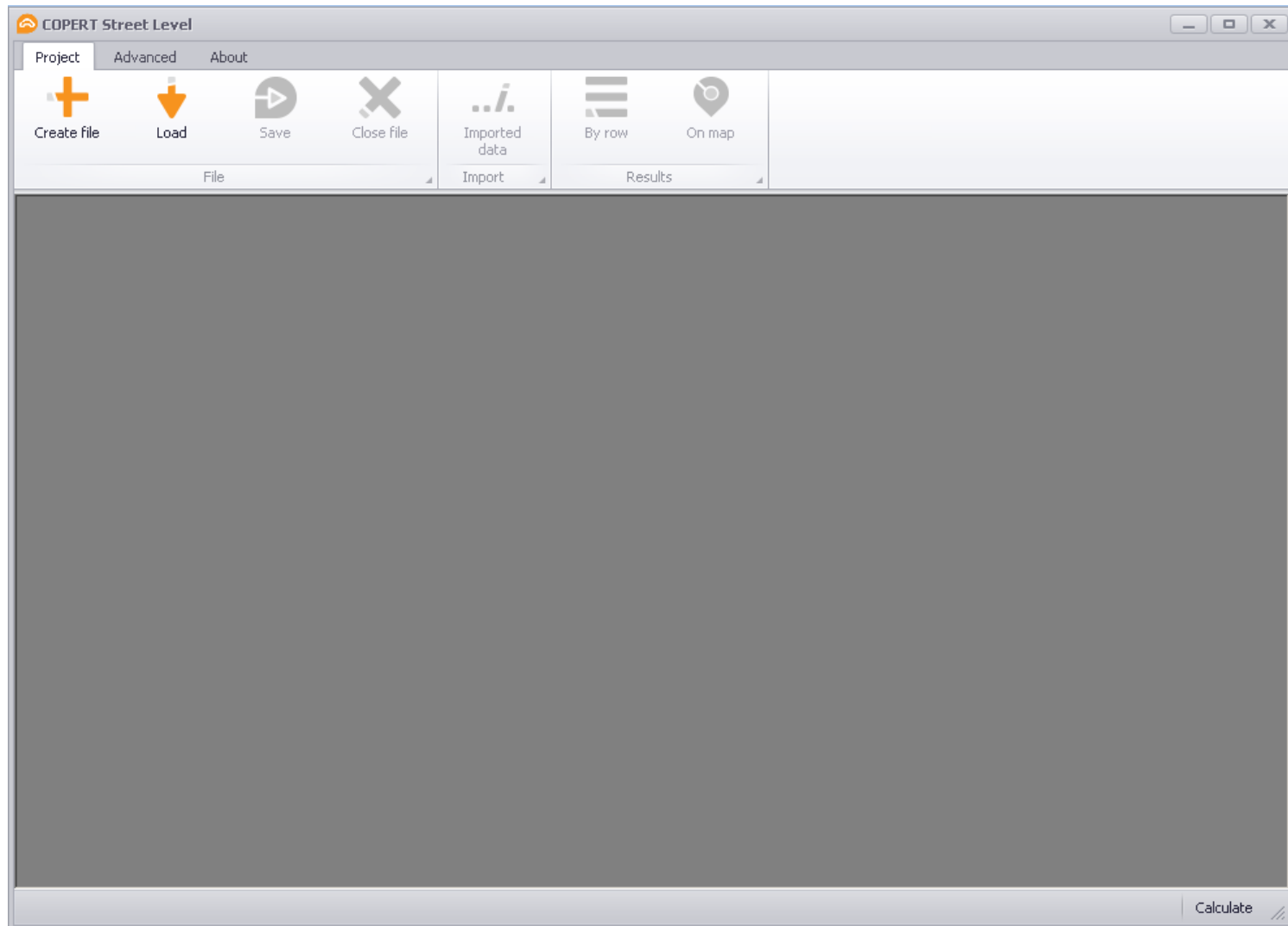
Pollutants covered:

CO, CO₂, NO_x, PM, VOC

- Emissions per segment (default)
- Emissions per segment and hour (optional)
- Emissions on a GIS map (optional)



Main window



Scenario creation

Create project [X]

Project name One file per hour

Input path

Baseline Country **Year** **Sheet name**

Basic columns

Link ID	Speed	Link Length	Vehicle Volume	<input type="checkbox"/> Type column	<input type="checkbox"/> Hour column
<input type="text" value="2 - B"/>	<input type="text" value="7 - G"/>	<input type="text" value="8 - H"/>	<input type="text" value="9 - I"/>	<input type="text" value="-"/>	<input type="text" value="-"/>

GIS columns **Node columns**

Start Lat	Start Lon	End Lat	End Lon	From node	To node
<input type="text" value="3 - C"/>	<input type="text" value="4 - D"/>	<input type="text" value="5 - E"/>	<input type="text" value="6 - F"/>	<input type="text" value="-"/>	<input type="text" value="-"/>

Input file sample

id	start_x	start_y	end_x	end_y	Speed	Link Length	Volume (PCUs)
253929	2564183.5007379500000000	4951336.8854587800000000	2564285.1131691500000000	4951386.2540454100000000	16	3	113
253930	2556750.0415526900000000	4952288.2272933700000000	2556779.6525372400000000	4952160.7929398200000000	25	2	65
253931	2567049.6102715500000000	4911556.6083547200000000	2567059.5177062400000000	4911699.2552590000000000	35	2	74
253932	2567032.2778268400000000	4911267.5251340300000000	2567040.2149065300000000	4911409.7152963000000000	21	1	91
253933	2567024.5077263800000000	4911139.8477070300000000	2567032.2778268400000000	4911267.5251340300000000	32	1	138
253934	2567040.2149065300000000	4911409.7152963000000000	2567049.6102715500000000	4911556.6083547200000000	24	2	131
253935	2567059.5177062400000000	4911699.2552590000000000	2567068.1115709300000000	4911842.5757963100000000	35	3	83
253936	2565635.8750023800000000	4952913.4316557100000000	2566005.9009897800000000	4953419.4795450300000000	28	2	54
253937	2566005.9009897800000000	4953419.4795450300000000	2566201.7676338300000000	4953267.5612740400000000	33	5	117
253938	2555180.8152187700000000	4949501.3654740100000000	2555301.1849841700000000	4949406.2673640400000000	31	5	66
253939	2555301.1849841700000000	4949406.2673640400000000	2555327.0890296700000000	4949370.0837206700000000	27	1	60
253940	2555327.0890296700000000	4949370.0837206700000000	2555364.6704897600000000	4949317.5890975200000000	34	5	124
253941	2561548.7131062100000000	4949979.7131343200000000	2561619.4232467600000000	4950098.1934850900000000	28	2	129
253942	2561394.8918338300000000	4949840.2176933900000000	2561456.9413180000000000	4949878.5428348300000000	21	4	139
253943	2561456.9413180000000000	4949878.5428348300000000	2561548.7131062100000000	4949979.7131343200000000	19	3	150
253944	2554896.3716559000000000	4958841.7563465400000000	2554857.8885079300000000	4958779.0891884700000000	21	3	103
253945	2554857.8885079300000000	4958779.0891884700000000	2554795.3603499500000000	4958691.4702598000000000	15	5	71
253946	2554933.1293517500000000	4958900.0817584500000000	2554896.3716559000000000	4958841.7563465400000000	29	3	59
253947	2550538.2024593900000000	4964429.3855789200000000	2550430.5008520500000000	4964430.1488193800000000	21	2	92
253948	2568709.8625530900000000	4943104.3101697100000000	2568559.8484073000000000	4943138.6985633200000000	28	3	72
253949	2568559.8484073000000000	4943138.6985633200000000	2568509.2091709400000000	4943140.6171697400000000	33	5	80
253950	2568509.2091709400000000	4943140.6171697400000000	2568459.5272822000000000	4943139.6505435600000000	31	2	111
253951	2551217.9860618700000000	4963027.8682783600000000	2551264.0834630100000000	4963026.8556620900000000	22	5	124
253952	2551158.6527732800000000	4963029.0423263300000000	2551217.9860618700000000	4963027.8682783600000000	22	1	73
253953	2552176.5693290400000000	4960583.1454355200000000	2552112.0819480200000000	4960625.5620897100000000	30	4	140
253954	2552112.0819480200000000	4960625.5620897100000000	2552044.3440378700000000	4960659.7332325700000000	27	4	56
253955	2552044.3440378700000000	4960659.7332325700000000	2551980.4466501600000000	4960703.3386597600000000	32	2	114
253956	2552267.3837696300000000	4960513.3806360400000000	2552176.5693290400000000	4960583.1454355200000000	15	3	79

Input data

View import data

Delete	Row	Link ID	Speed	Length	Volume	Start Lat	Start Lon	End Lat	End Lon
<input type="checkbox"/>	3	253929	16.0	3.0	113.0	2564183.5007379500	4951336.8854587800	2564285.1131691500	4951386.2540454100
<input type="checkbox"/>	4	253930	25.0	2.0	65.0	2556750.0415526900	4952288.2272933700	2556779.6525372400	4952160.7929398200
<input type="checkbox"/>	5	253931	35.0	2.0	74.0	2567049.6102715500	4911556.6083547200	2567059.5177062400	4911699.2552590000
<input type="checkbox"/>	6	253932	21.0	1.0	91.0	2567032.2778268400	4911267.5251340300	2567040.2149065300	4911409.7152963000
<input type="checkbox"/>	7	253933	32.0	1.0	138.0	2567024.5077263800	4911139.8477070300	2567032.2778268400	4911267.5251340300
<input type="checkbox"/>	8	253934	24.0	2.0	131.0	2567040.2149065300	4911409.7152963000	2567049.6102715500	4911556.6083547200
<input type="checkbox"/>	9	253935	35.0	3.0	83.0	2567059.5177062400	4911699.2552590000	2567068.1115709300	4911842.5757963100
<input type="checkbox"/>	10	253936	28.0	2.0	54.0	2565635.8750023800	4952913.4316557100	2566005.9009897800	4953419.4795450300
<input type="checkbox"/>	11	253937	33.0	5.0	117.0	2566005.9009897800	4953419.4795450300	2566201.7676338300	4953267.5612740400
<input type="checkbox"/>	12	253938	31.0	5.0	66.0	2555180.8152187700	4949501.3654740100	2555301.1849841700	4949406.2673640400
<input type="checkbox"/>	13	253939	27.0	1.0	60.0	2555301.1849841700	4949406.2673640400	2555327.0890296700	4949370.0837206700
<input type="checkbox"/>	14	253940	34.0	5.0	124.0	2555327.0890296700	4949370.0837206700	2555364.6704897600	4949317.5890975200
<input type="checkbox"/>	15	253941	28.0	2.0	129.0	2561548.7131062100	4949979.7131343200	2561619.4232467600	4950098.1934850900
<input type="checkbox"/>	16	253942	21.0	4.0	139.0	2561394.8918338300	4949840.2176933900	2561456.9413180000	4949878.5428348300
<input type="checkbox"/>	17	253943	19.0	3.0	150.0	2561456.9413180000	4949878.5428348300	2561548.7131062100	4949979.7131343200
<input type="checkbox"/>	18	253944	21.0	3.0	103.0	2554896.3716559000	4958841.7563465400	2554857.8885079300	4958779.0891884700
<input type="checkbox"/>	19	253945	15.0	5.0	71.0	2554857.8885079300	4958779.0891884700	2554795.3603499500	4958691.4702598000
<input type="checkbox"/>	20	253946	29.0	3.0	59.0	2554933.1293517500	4958900.0817584500	2554896.3716559000	4958841.7563465400
<input type="checkbox"/>	21	253947	21.0	2.0	92.0	2550538.2024593900	4964429.3855789200	2550430.5008520500	4964430.1488193800
<input type="checkbox"/>	22	253948	28.0	3.0	72.0	2568709.8625530900	4943104.3101697100	2568559.8484073000	4943138.6985633200
<input type="checkbox"/>	23	253949	33.0	5.0	80.0	2568559.8484073000	4943138.6985633200	2568509.2091709400	4943140.6171697400
<input type="checkbox"/>	24	253950	31.0	2.0	111.0	2568509.2091709400	4943140.6171697400	2568459.5272822000	4943139.6505435600
<input type="checkbox"/>	25	253951	22.0	5.0	124.0	2554913.0020610700	4962007.0020610700	2554964.0020610700	4962006.0020610700

00:00 - 01:00

Check all

Uncheck all

Delete selected

Results

View results

Row	Link ID	Speed [km/h]	Length [km]	Volume [veh]	00:00 - 01:00 [g]
3	253929	16.0	3.0	113.0	1,520.41
4	253930	25.0	2.0	65.0	552.59
5	253931	35.0	2.0	74.0	629.10
6	253932	21.0	1.0	91.0	386.81
7	253933	32.0	1.0	138.0	586.60
8	253934	24.0	2.0	131.0	1,113.68
9	253935	35.0	3.0	83.0	1,058.42
10	253936	28.0	2.0	54.0	459.08
11	253937	33.0	5.0	117.0	2,486.66
12	253938	31.0	5.0	66.0	1,402.73
13	253939	27.0	1.0	60.0	255.04
14	253940	34.0	5.0	124.0	2,635.43
15	253941	28.0	2.0	129.0	1,096.68
16	253942	21.0	4.0	139.0	2,363.39
17	253943	19.0	3.0	150.0	1,912.82
18	253944	21.0	3.0	103.0	1,313.47
19	253945	15.0	5.0	71.0	1,625.91
20	253946	29.0	3.0	59.0	752.37
21	253947	21.0	2.0	92.0	782.13
22	253948	28.0	3.0	72.0	918.15

CO

CO2

NOx

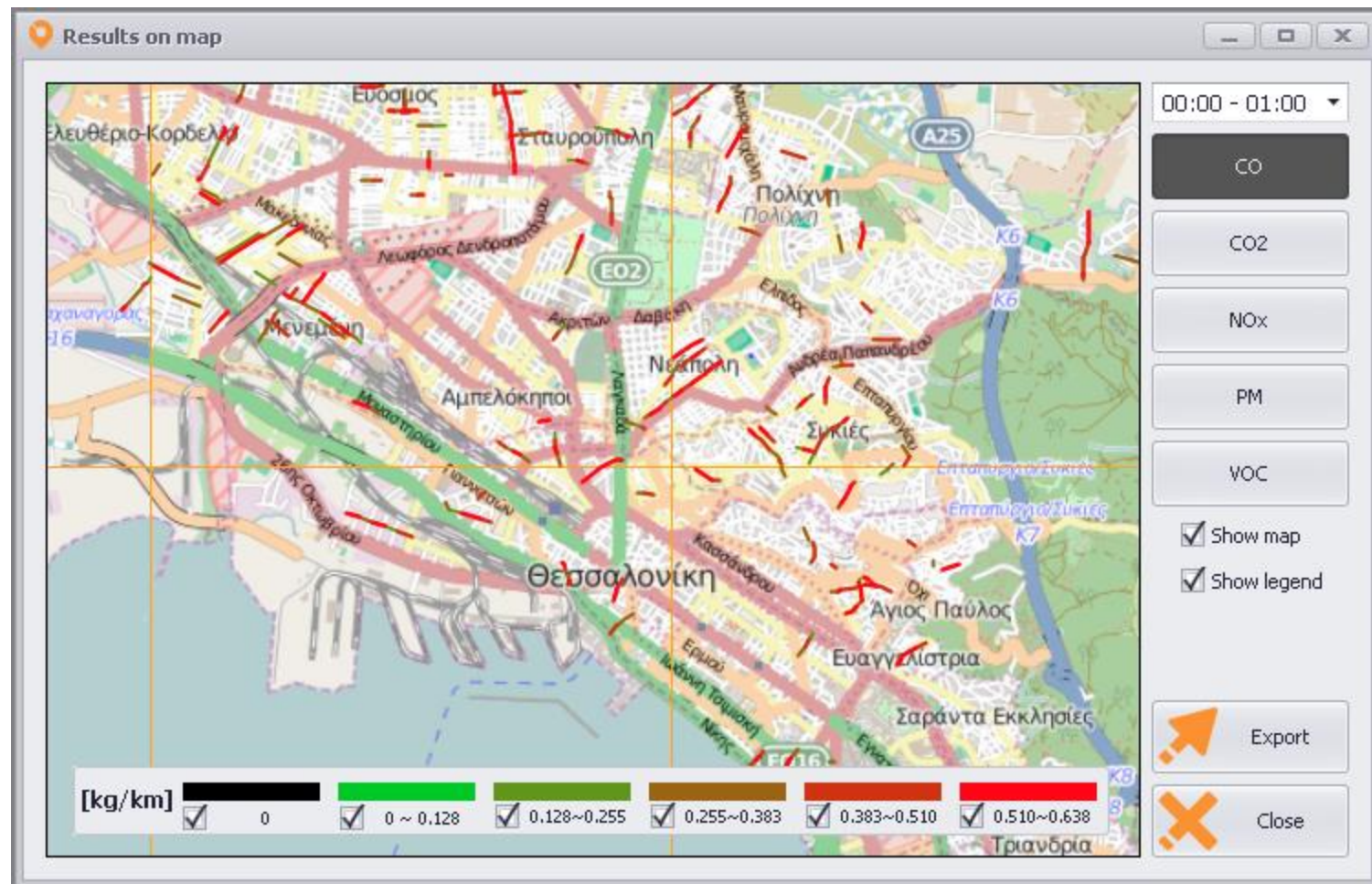
PM

VOC

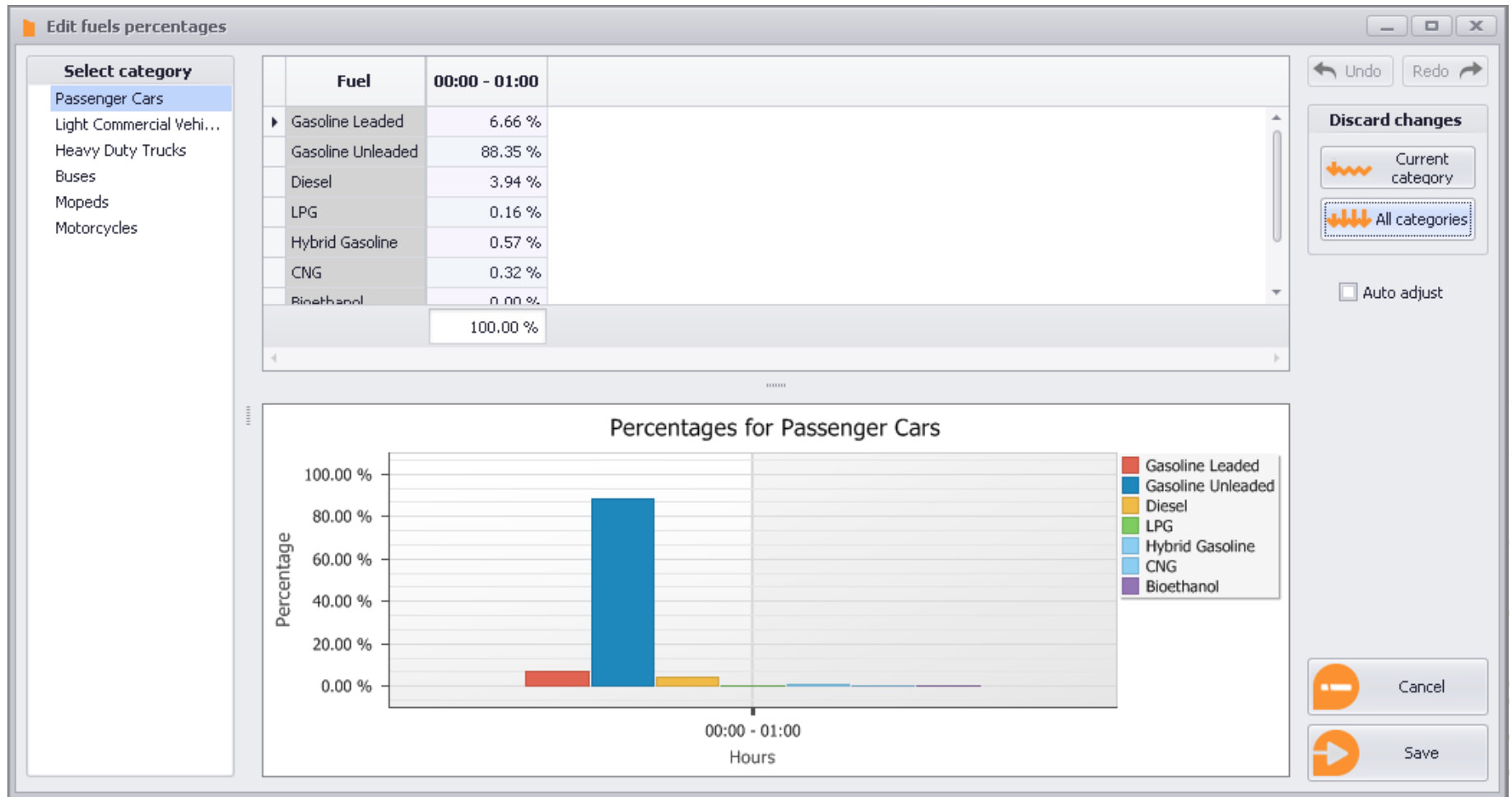
Export

Close

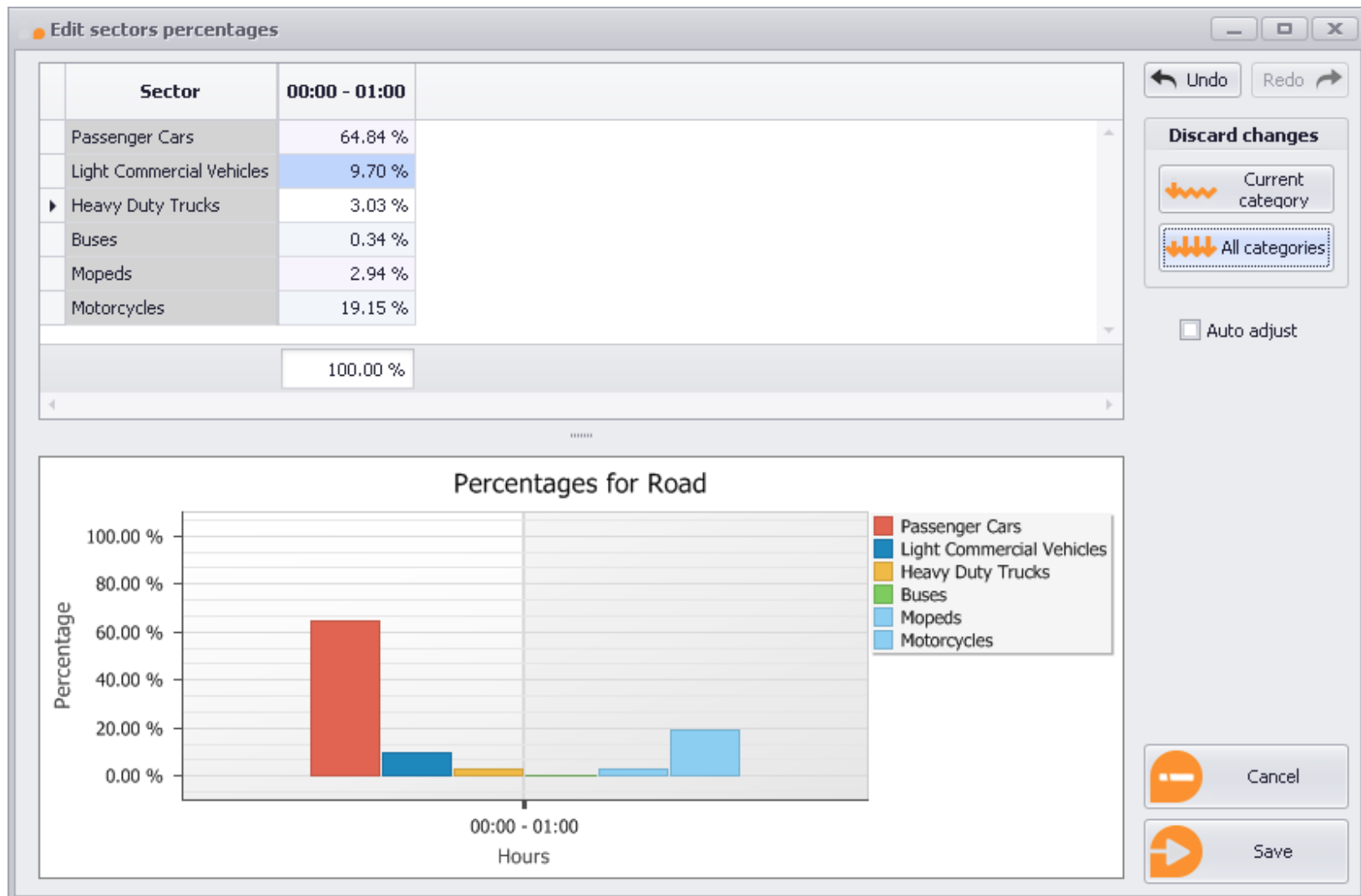
Emissions map



Fleet composition per fuel type



Fleet composition per vehicle category



Online presentation

<https://www.youtube.com/watch?v=OCs4UJAzIBI>

