United States: the SmartWay programme

<table>
<thead>
<tr>
<th>Context</th>
<th>Voluntary collaborative programme between US Environmental Protection Agency (EPA) and the industry. SmartWay long term goals are: - Improve energy efficiency and lower greenhouse gas emissions and air pollution from transport activities; - Create a strong market-based incentive that challenge companies shipping products, and transportation companies delivering these products. SmartWay objectives are: - Providing the freight industry with information so that companies can make informed emission optimization choices; - Providing standardized system of data collection and calculation; - Creating a market based system to incentivize good performers; - Providing calculation tools, a data management system, and informational materials.</th>
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<tbody>
<tr>
<td>Objective</td>
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<td>Programme description</td>
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<td>Management</td>
<td>Environmental Protection Agency (EPA) and so called ‘Charter Partners’ 15 companies and organizations that helped EPA to develop and evaluate the core principles, tools, and recommendations that make up the SmartWay program.</td>
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<td>Sponsors</td>
<td>Environmental Protection Agency (EPA)</td>
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<td>Beneficiaries</td>
<td>Freights companies, both carriers and shippers.</td>
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<td>Mode of intervention</td>
<td>The Smartway Partnership is composed by six key program components: 1) <strong>SmartWay Supply Chain Partnership</strong>: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption and improve performance annually. 2) <strong>SmartWay Technology Program</strong>: A testing, verification, and designation program to help freight companies identify equipment, technologies and strategies that save fuel and lower emissions. The program includes Heavy Duties testing, technology verification and the certification of technologies as ‘smartway’. 3) <strong>SmartWay Finance Program</strong>: A competitive grant program that makes investing in fuel-saving equipment easier for freight carriers. The program includes innovative loan and financial mechanisms. 4) <strong>SmartWay Vehicles</strong>: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo. 5) <strong>SmartWay Brand Marketing</strong>: a program producing multi media campaigns, educational materials, annual reward.</td>
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<td>Example of projects</td>
<td>SmartWay Supply Chain Partnership collects and publishes, annually, data by partner’s organisations in order to define their three-year improvements target. Smartways provides technical assistance for quantification of the emissions, and recommends strategies to reduce fuel consumption. In addition, the database collect industry data in order to calculate 8 basic metrics that shippers and carriers need to optimize their performance. Among the benefits, the high visibility granted to the best partners. Depending on the type of partners, different database are available to collect data: Carrier Data Collection tools, shippers Tool, Truck Tool, Logistics Tool, Multimodal Suite. For the Carrier Data, the type of information requested are: - Fleet characteristics (operation, FTL, LTL, PUD), truck types (weight classes), fuels type used (%); - Activity information: total fuel used last year (by fuel type), total km driven last...</td>
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The Smartway Carrier Data provides outputs regarding:
- Co2 performance (e.g., Co2/mile, Co2/ton-mile, Co2/volume-mile);
- Nox, PM performance;
- Benchmarks versus the rest of the industry.

**Follow-up**

Started in 2004, the Supply Chain Partnership has now more than 2700 partners (carriers and shippers). Among the directions advanced to follow-up and extend the Partnership:
- Increase the number of participants (targeting specific sectors such as oil and gas transporters, local and regional delivery companies, private fleets, local construction transporters);
- Obtain greater support and commitment from the state government;
- Seek funding to support technologies that best fit new sectors;
- Promote corporate image with events and awards.

### Impact/evaluation

#### Ex-post evaluation

According to EPA’s March 2011 SmartWay Program Highlights, SmartWay’s clean air achievements include emission reductions of:
- 16.5 million metric tons of CO2,
- 235,000 tons of nitrogen oxides (NOx),
- 9,000 tons of particulate matter (PM).

#### Market transformation

Representatives from environmental, retail, and trucking associations consider EPA’s SmartWay program an effective program for reducing fuel costs and reducing the environmental impact of freight movement. According to a survey conducted by American Shipper, SmartWay ranked first among all the choices of supply chain sustainability programs. The results are confirmed by the high increase of participation to the programs since 2008.

#### Energy savings

According to SmartWay Program (2011), between 2004 and 2011, SmartWay partners saved 50 million barrels of oil. These savings are equivalent to taking over 3 million cars off the road for an entire year. SmartWay has also helped U.S. businesses reduce their fuel costs, saving $6.1 billion dollars to date, according to EPA.

#### Public costs

EPA’s SmartWay program received $2.42 million in 2011 and $2.7 million in 2012. The programme has 11 full-time employees and has contracted 10 Partner Account Managers. In 2008-2010, SmartWay also received $16.9 million in Diesel Emission Reduction Act (DERA) and in 2009 $30 million in American Reinvestment and Recovery Act. With these supplementary funds, EPA awarded 12 grants to 9 grantees. The grants were for loan guarantees, loans, subsidies, and leases to retrofit, repower, or replace equipment to reduce emissions.

#### Problems / adaptations

In order to calculate SmartWay program emission reductions, EPA relies on self-reported industry data. OTAQ performs some checks of data provided by industry. EPA also has 10 Partner Account Managers who review data provided by the partners, along with any explanations, and who can question data that appears incorrect. However, there is no direct verification by EPA of data submitted by SmartWay participants. The lack of direct verification is a potential design weakness in the program, which affects the Agency’s ability to ensure the overall validity of claimed SmartWay Transport Partnership results.

#### Accompanying measures

The strength of Smartway Supply Chain Partnership program is partly due to a four accompanying initiatives that have been developed and extended with the Partnership Program: the Smartway Technology Program, the Finance Program and the Vehicles and Brand Program. In particular, the Finance Program started in 2008, awarding $3.4 million to three loan programs that help small trucking companies reduce fuel costs and emissions. In 2009, the initiative awarded $30 million to support the development of five financing programs for trucks, school buses and non-road vehicles/equipment. In 2009-2010, the SmartWay Finance
Program awarded $13.5 million to support four truck financing programs.

### Lessons and conditions of replication

| Management team | The report “Designing and Implementing a Freight Sustainability Program: Tools, Best Practices, and Lessons Learned” indicates that, for the first years, the program can be designed and developed by a small group of experts with strong technical and communication skills. For running the programme, the report suggests a team composed on the basis of the active members, with an indication of 1 staff per 100 - 150 active members, and technical as well as marketing skills. |
| Develop a market for energy efficiency | Thanks to the large participation and to the diversification of instruments provided, Smartway had impact on greening the freight supply chain; however, there are not data for quantifying the impact on energy efficiency market. |
| Relevant size of the project | The strength of the programme is the number of partner’s organisations and the share of market covered. The Partnership now covers over 650,000 trucks and 60 billion miles per years (approximately 30% of US Road freight). Among the participants: US corporations use Smartway accounting tools and methods; small businesses rely upon SmartWay for the Technical and Finance program, the US government, through GSA, uses Smartway to implement EO 13514, which directs the federal government to green its supply chain |
| Conditions of applications | To start-up similar program, the active involvement of main companies should be looked after since the elaboration phase (e.g. “Charter Partners”). Consequently, the Program program best suits to countries where the freight market is not highly fragmented. The report “Designing and Implementing a Freight Sustainability Program: Tools, Best Practices, and Lessons Learned” indicates as lessons to consider:  
  - Companies should be helped in understanding better the results/benefits and in marketing this to their shippers and general public;  
  - The database should be with simple forms in order to reduce time and efforts to collect/report data to a minimum;  
  - Workshop should be held for getting companies started, and period follow up organised; |

### REFERENCES

**Source**  
[http://www.epa.gov/smartway/index.htm](http://www.epa.gov/smartway/index.htm)  
EPA Could Improve the SmartWay Transport Partnership Program by Implementing a Direct Data Verification Process Report No. 12-P-0747 August 30, 2012, EPA OFFICE OF INSPECTOR GENERAL  

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