



# **Formulation of Industrial Energy Efficiency Policy and Related Instruments in Iran**

## ***Overview Voluntary Agreements***

**Tehran 14/10/2014**

# VA - Definitions



.Voluntary Agreements (**VA**) classified as market oriented environmental policy instruments (compared to command and control strategies)

**VA** are non-legislative commitments to undertake additional efforts in pollution abatement or in this project case increase in energy efficiency.

1. **Unilateral commitments** made by polluters;
2. Agreements achieved through direct bargaining **between polluters and pollutees**;
3. **Environmental agreements** negotiated between industry and public authorities;
4. **Voluntary programs developed by public authorities** (e.g., environmental agencies) to which individual firms are invited to participate.

The **benefits of VA** are usually  
can be put in place to address a given environmental problem more rapidly than traditional regulatory approaches  
easier and quicker to update and upgrade than regulations thus allowing to follow technological evolution and market changes  
VAs may help authorities hold down implementation costs incurred by industry and exploit “soft” side effects such as dissemination of information and awareness raising

## VA – Widely Used



**Negotiated agreements**, have been used by a number of governments as a mechanism for promoting energy efficiency within the industrial sector.

A recent survey of such target-setting agreement programmes **identified 23 energy efficiency or GHG emissions reduction voluntary agreement programmes in 18 countries**, including countries in Europe, the United States, Canada, Australia, New Zealand, Japan, Republic of Korea, and Taiwan Province of China (Price, 2005).

# VA – Main Reasons for Application



## Reasons for Regulators

- compensate for gaps in capacity to enforce mandatory regulations,
- to build capacity,
- to reduce the transaction costs of mandatory regulation,
- avoid fostering a “culture of resistance” to environmental regulation

## Reasons for Industrial Participants

- to mitigate a background threat of mandatory regulation (i.e., to preempt more stringent mandatory regulation or to soften enforcement of existing regulation),
- to obtain explicit or implicit subsidies,
- to boost sales in markets where consumers care about environmental performance,
- to soften pressures generated by communities and nongovernmental organizations, and
- to cut production costs by adopting win win pollution prevention techniques.

## VA – Pros



- can be **put in place** to address a given environmental problem **more rapidly** than traditional regulatory approaches
- **Easier and quicker to update** and upgrade than regulations thus allowing to follow technological evolution and market changes
- VAs may help authorities **hold down implementation costs incurred by industry** and exploit “soft” side effects such as dissemination of information and awareness raising;

## VA – Cons



- **No obligations** for industry
- **Limited** participation
- **Lack of independent controls** of compliance and enforcement
- **No specific obligations and/or lenient targets that reflect little more than BAU.**  
This may happen in particular if the public authorities have incomplete information to establish the saving potential and the costs to industry to capture this potential;
- **VAs do not assure that targets are met**

# VA – Best Practice



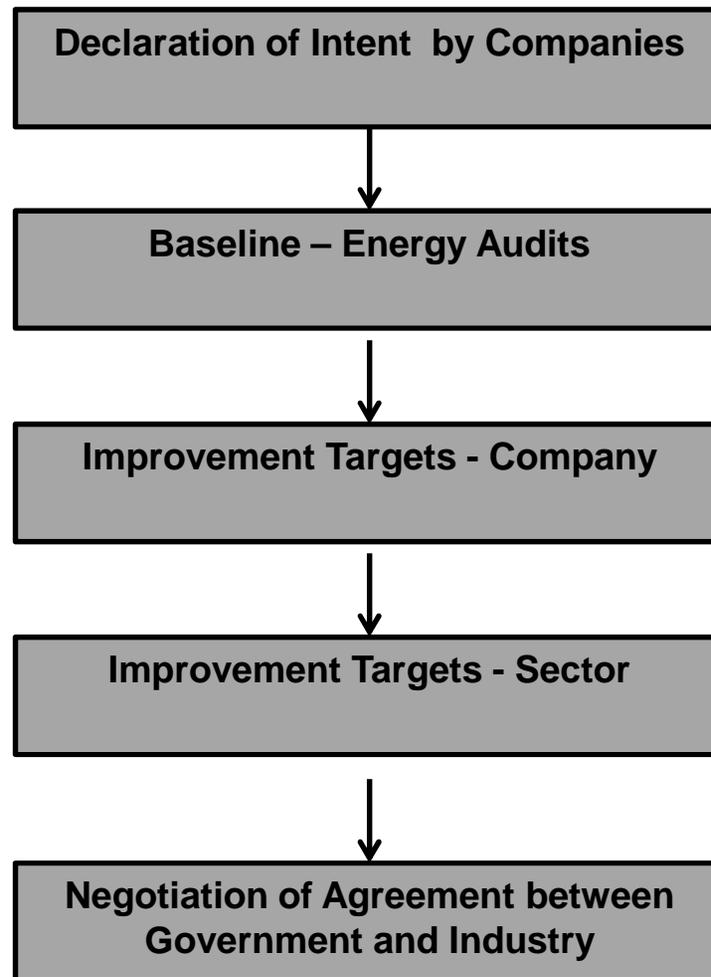
International best practice calls for

- Establishing a **coordinated set of policies** that provide strong economic incentives
- **Technical support** to participating industries
- **Financial support** to participating industries
- Signed, **legally-binding** agreements
- **Realistic long-term** (typically 5-10 years) targets
- Facility- or **company-level implementation** plans for reaching the targets
- **Annual monitoring and reporting** of progress toward the targets
- **A real threat** of increased government regulation or energy/GHG taxes if targets are not achieved
- **Effective supporting programmes** to assist industry in reaching the goals outlined in the agreements.

# VA – Best Practice - Process



- Having a **public authority** with appropriate energy statutory powers and expertise in charge of the agreements
- **Coverage of a major part of an industrial branch** (number of players) for significant actions, most importantly effective implementing provisions relying on energy management and/or energy audits, over a reasonable timescale,
- Importance of **pre-agreement data** for the evaluation of the VA (as opposed to ongoing compliance monitoring) to point whether the VA is effective,
- Importance of **capacity building within public authorities** related to VA design, implementation and evaluation



# VA – Required Data Input



Identify **industry wide energy efficiency indicators** of Iran – international benchmarks

(levelized in relation to climate, products etc..) benchmarks may be available from industry associations (e.g Cement Sustainability Initiative, International Aluminium Institute etc..)

Identify **company specific energy savings measures** through audits (**technical and financial feasibility**)

**Supporting Policies** (incentives or penalties)

If not only efficiency but GHG emissions all relevant information on fuel types, process emissions

Outlook for demand of products

[www.energy-changes.com](http://www.energy-changes.com)

## CementBenchmarks

International Benchmarks for Thermal Energy Consumption in Clinker Making with Different Technologies<sup>1</sup>

Production Process	Energy Consumption (GJ/t Clinker)	
	Min	Max
Dry, multi-stage cyclone pre-heater and pre-calciner kilns	2.85	3.0
Dry process rotary kilns with cyclone pre-heaters	3.1	4.2
Semi-dry semi wet processes (1 stage kiln)	3.3	4.5
Dry process long kilns		5.0
Wet process long kilns	5.0	6.0
Shaft kilns (up to 100 t/d capacity)	3.1	4.2



## VA – Some Examples



	General Framework	Target Sectors	Obligations	Incentives/ Penalties	Monitoring/ Reporting	Results
<b>Denmark</b>	VA in cooperation with Green Tax Package 1996	differentiated between three energy applications: heavy process, light process and space heating with heavy process subject to the lowest CO2 tax and space heating the highest  Companies can either sign an agreement individually or as a member of a group.	In order to enter a VA the company must implement an EMS, which also includes guidelines on energy efficient procurement.  <i>All profitable energy saving projects generally have to be carried out.</i>	Reduction of green tax	Annual reports Periodic verifications	In CO2 terms one often cited estimate for 1996-2005 is an emission reduction of 6% in participating companies.
<b>Estonia</b>	Environment Charges Act (2006) Pollution charges for several pollutants emitted into air	Agreement entered into between an industrial company or association and the Minister of the Environment	The financing of activities shall substitute for the pollution charge if the polluter implements, at its expense, environmental protection measures which ensure the reduction of pollutants or waste over the course of three	a possibility for substituting the pollution charge (incl. CO2 charge) with financing activities.	Companies have to submit a quarterly report on application of environmental protection measures and the documents in proof of the costs incurred to the environmental department.	it appears that the incentives have been too weak and general for reaching effective results and that the system mainly has a qualitative character.

## VA – Some Examples



<p><b>Finland</b></p>	<p>The <i>Energy Efficiency Agreements on the Improvement of Energy Efficiency in Industries</i> cover the energy intensive sector within emission trading (industry and energy production), medium-sized energy users (industry and the private service sector) and energy services (electricity transmission, distribution and retail, and district heating and cooling).</p>	<p>Energy intensive industry (industry and energy production),</p> <ul style="list-style-type: none"> <li>· Medium-sized energy users in industry (food and drink, chemical, plastic, technology and wood product) and in private service sector (commerce, hotel and restaurants),</li> </ul>	<p>Within one year after joining the agreement the companies have an obligation to map their energy use and set overall objectives. Within two years' time the companies must identify the energy saving measures and per each site, set up energy saving targets and schedule the implementation of the measures. Carrying out detail energy analyses in all sites will take a couple of years in practise. During the following years the companies must implement measures to fulfil the obligation on continuous improvement</p>	<p>Subsidies on audits and investments</p>	<p>The participating companies report yearly on their energy and water use, production volumes, implemented energy efficiency measures and their impact. The monitoring database is founded by the Ministry and developed and maintained by Motiva</p>	<p>The total energy savings under the Energy Conservation Agreements amount to <b>9 TWh/year</b> over their lifetime achieved via measures reported as implemented in industry, energy sector, municipal sector, property and building sector. This equals more than 2% of Finland's total energy consumption in 2007.</p>
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