TIC Council Webinar – EU Industry Days
Energy Management of EU Industries: Boosting Competitiveness and Accelerating Transition
29 April 2021
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Energy Management of EU Industries:
Boosting Competitiveness and Accelerating Transition

Speakers

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Climate neutrality in the EU industry strategy
Objectives of the EU industry strategy

**GREEN TRANSITION**

The European Green Deal is Europe’s new growth strategy. At the heart of it is the goal of becoming the world’s **first climate-neutral continent** by 2050.

**GLOBAL COMPETITIVENESS**

The **right conditions** are needed for entrepreneurs to turn their ideas into products and services and for companies of all sizes to thrive and grow. The EU must leverage the impact, the size and the integration of its single market to make its voice count in the world and **set global standards**.

**DIGITAL TRANSITION**

**Digital technologies** are changing the face of industry and the way we do business. They allow **economic players** to be more proactive, provide workers with new skills and support the decarbonisation of our economy.
Supporting industry towards climate neutrality

- Supplying clean secure and affordable energy
  - A more integrative approach to renewable energy industries
    - new certification schemes for renewable and low-carbon fuels
  - Principle of energy efficiency first
- Transforming manufacturing to clean processes
  - Strategies for energy-intensive industries, notably steel and chemicals
    - regulatory encouragement of energy management and better process controls,
    - incentivise investments in energy efficiency and industrial symbiosis.
- New initiatives regarding construction
- Accelerate the shift to sustainable mobility
Building a more circular economy

A new **Circular Economy Action Plan** was adopted in March 2020 to help modernising the EU’s economy.

- The sustainable product policy will be updated.
- Efforts will focus on resource-intensive sectors such as:
  - textiles
  - construction
  - electronics
  - plastics

The Commission will propose measures to ensure that all packaging in the EU is reusable or recyclable by 2030.

New business models based on renting goods and services will help to shift consumption patterns away from single or limited use products.
Main actions for the digital transformation

**Greening the ICT industry**
- Improve its energy and circular performance
  - Notably data centres, but also all other infrastructure and devices, microprocessors

**ICT for green transformation**
- Technologies to optimise use of energy, materials and water
  - like AI, 5G, cloud computing and Internet of things
  - energy management systems

**A more digital EU single market**
- Digital services act
- Digital markets act
- Digital innovation hubs

**Overarching digital strategy**
- Cybersecurity
- Data strategy incl. common data spaces, e.g., in energy
- Artificial intelligence, 5G, quantum
- Media action plan
Fundamental factors in making the EU’s twin industrial transformations happen

- A deeper and more digital single market
- Upholding a global level playing field
- Investing and financing the transition
- Supporting industries towards climate neutrality
- Skilling and reskilling
- Embedding a spirit of industrial innovation
- Building a more circular economy
Industrial ecosystems bring together all actors
Industrial Ecosystems in the EU (2021 ed.)

- Building of residential and non-residential estates
- Building of roads and railways
- Building of utilities and civil engineering
- Associated activities

- Electric motors, engines and turbines
- Electric power generation
- Manufacturing and distribution of gas

- Raw materials
- Manufacturing of products with high environmental impact: chemicals, iron and steel, forest-based products, plastics, refining, cement, rubber, non-ferrous metals, fertilisers, etc.

- Construction
- Retail
- Proximity & Social Economy
- Tourism
- Creative & Cultural Industries
- Aerospace & Defence
- Textiles
- Electronics
- Mobility - Transport - Automotive
- Renewable Energy
- Energy-Intensive Industries
- Agro-Food
- Health

European Commission
Measures adopted, in preparation

- Strategy for smart sector integration
- Strategy for sustainable chemistry
- Strategy for offshore renewable strategy
- Strategy for smart, sustainable mobility
- Strategy on built environment and renovation wave initiative

- Legislation on energy efficiency, renewable energy (consultations closed) and energy performance of buildings (consultation open).
- Carbon border adjustment mechanism
Building on partnerships for implementation

• To achieve the objectives of the Green Deal, the EU will step up its bilateral engagement with partner countries.
  • G20, China, Africa et al.
  • The Green Deal emphasises supporting the EU's enlargement and Neighbourhood countries.
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A102%3AFIN

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A94%3AFIN

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A98%3AFIN
Javier Lopez Gomez,
Internal Energy Efficiency in Buildings Manager,
SGS
Decarbonization and energy efficiency

- **Biodiversity**: Measures to protect our fragile ecosystem
- **From Farm to Fork**: Ways to ensure more sustainable food systems
- **Sustainable agriculture**: Sustainability in EU agriculture and rural areas thanks to the common agricultural policy (CAP)
- **Clean energy**: Clean energy
- **Sustainable industry**: Ways to ensure more sustainable, more environmentally-respectful production cycles
- **Building and renovating**: The need for a cleaner construction sector
- **Sustainable mobility**: Promoting more sustainable means of transport
- **Eliminating pollution**: Measures to cut pollution rapidly and efficiently
- **Climate action**: Making the EU climate neutral by 2050

Role of energy efficiency on sustainable development
Energy management and SDGs

FACTS AND FIGURES
- Energy is the dominant contributor to climate change, accounting for around 60 percent of total global greenhouse gas emissions.
- Reducing the carbon intensity of energy is a key objective in long-term climate goals.

GOAL 7 TARGETS
- By 2030, double the global rate of improvement in energy efficiency.
- By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.
ISO 50001:2018 or Effective Energy Management System (EnMS), is an energy standard which establishes an international framework for the supply, use and consumption of energy in industrial, commercial and institutional organizations.

EnMS help organizations to establish processes to improve energy performance. Implementation should reduce energy costs, Greenhouse Gas (GHG) emissions and other environmental impacts.
EnMS ISO 50001 – Current status

# ISO 50001 certificates and sites

- ISO 9001: 883,521
- ISO 14001: 312,580
- ISO 50001: 18,227

Total valid certificates

Total number of sites

Top 10 countries - # sites

1. Germany: 13122
2. France: 6751
3. Spain: 3219
4. UK: 3203
5. China: 2943
6. Italy: 2823
7. India: 961
8. Hungary: 957
9. Austria: 681
10. Sweden: 596
EnMS ISO 50001 – Current status

Original Standard Issued

Draft new version issued

ISO 50001:2018 issued (August)

Transition period

ISO 50001:2011

EXPIRES

AUG 2021
High level structure

• Scope
• Normative references
• Terms and definitions
• Context of the organization
• Leadership
• Planning
• Support
• Operation
• Performance evaluation
• Improvement
Energy planning process

Planning Inputs
(see 4.1, 4.2, 6.1)
- Internal and external issues (from context)
- Needs and expectations of interested parties

Planning
Strategic
6.1 Actions to address risks and opportunities
- Identification of risks and opportunities

Planning Outputs
(see 6.1.1)
- Actions to address risks and opportunities

Tactical
6.3 Energy review

Energy Review
Based on energy consumption and/or identified opportunities for energy performance improvement, determine SEUs
For SEUs, determine:
- Relevant variables and
- Current energy performance
- Personnel
Determine and prioritize opportunities for improving Energy performance

- Energy use and consumption trends
- Future energy use and consumption
- Opportunities for energy performance improvement
- SEUs
- EnPI(s)
- EnB(s)
- Energy objectives, energy targets, and action plans
- Energy data collection plan
Key components of ISO 50001:2018

- Increases strategy approach to **energy management**
- Structured manner of addressing **organizational risk and opportunities**
- Increased emphasis on **leadership management**
- Use of **simplified language** and a common structure and terms
- Includes updated **energy terminologies and concepts**
Complementary EnMS Standards

Since publication of ISO 50001 Energy management system – Requirements with guidance for use, in June 2011, the International Technical Committee responsible for developing standards on energy management (ISO/TC 242) has developed a suite of complementary EnMS standards which will guide organizations through the various stages of setting up an EnMS. These consist of:

- **ISO 50002:2014 ENERGY AUDITS**  
  Requirements with guidance for use

- **ISO 50003:2014 ENMS**  
  Requirements for bodies providing audit and certification of energy management systems

- **ISO 50004:2014 ENMS**  
  Guidance for the implementation, maintenance and improvement of an energy management system

- **ISO 50006:2014 ENMS**  
  Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPI) – General principles and guidance

- **ISO 50015:2014 ENMS**  
  Measuring and verification of energy performance of organizations – General principles and guidance
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BENEFITS & PITFALLS OF ISO 50001 CERTIFICATION

EXCELLENCE, SIMPLY DELIVERED, IN A SUSTAINABLE WAY.

Kirit Patel
29 April 2021
DHL Supply Chain
# Agenda

1. Background – Deutsche Post DHL
2. Mission 2050 and Interim Targets
3. Why ISO 50001 benefits and pitfalls
4. #EMS10Steps
5. Wrap-up
We have a strong track record as a sustainable logistics provider

- **4.7mn** hours of employee education and training[^1]
- **1st** global logistics company to provide climate-friendly products
- **86%** green electricity worldwide
- **37%** carbon efficiency improvement since 2007
- **Zero emissions by 2050** ambitious environmental protection target
- **~18,000** alternative drive vehicles[^2]
- **Global Compliance Management System**
- **+70,000** employees trained as Certified GoGreen Specialist

Note: Deutsche Post DHL Group has set itself a net zero emissions target for 2050 for all transport-related emissions
[^1] ~ 570,000 employees
[^2] ~106,000 vehicles
Energy Consumption – Our fuel consumption reflects the ongoing heavy demand for transportation solutions

The total energy consumption increased by 4.5%. Air transportation increased by 5.4% while road transportation decreased by 8.0%. Consumption in buildings reduced by -0.3%.

1) Including district heating and cooling

2020 ESG Statbook
Deutsche Post DHL Group is a ‘green’ pioneer in logistics

- **Climate Protection Program**: The Group is the first global logistics company to set a quantifiable climate protection target.
- **First Interim Target reached**: The Group reaches its 2012 interim goal two years ahead of schedule: increasing carbon efficiency by 10% over 2007 levels.
- **Integrated into Strategy**: Beyond ambitious financial targets, the Group wants to become the benchmark for responsible business.
- **Pioneer in electric commercial vehicles**: The company’s own electric vehicle makes mail and parcel delivery quieter and more environmentally friendly.
- **Target achieved**: The Group reaches its 2020 climate protection goal early, improving carbon efficiency between 2008 and 2016 by 30% over 2007 levels.
- **Zero Emissions by 2050**: Deutsche Post DHL sets a new climate protection target Mission 2050 and interims targets for 2025.

**New Sustainability Roadmap**: Announced March 2021

- **2008**
  - **Climate Protection Program**
  - **First Interim Target reached**
- **2010**
  - **Integrated into Strategy**
- **2014**
  - **Pioneer in electric commercial vehicles**
- **2015**
  - **Target achieved**
- **2016**
  - **Zero Emissions by 2050**
- **2017**
  - **New Sustainability Roadmap**
- **2021**
We will invest €7 billion until 2030 in **Clean Operations** to reduce our emissions to under 29 million tonnes by 2030 and thereby commit to Science Based Targets initiative (SBTi)

- Target **>30% Sustainable Aviation Fuels blending** by 2030 in our airfreight business
- **Electrify 60% of last-mile delivery vehicles & grow sustainable fuel share in line-haul on average to >30%** by 2030
- **Carbon neutral design** to be used for all new buildings
- Increase the usage of **Sustainable Marine Fuel** for our FCL & LCL shipments
- **Offer green alternatives for all of our core products/solutions** by using, for example sustainable fuels and low carbon technologies
**Why ISO 50001 ….. Benefits and Pitfalls**

- Demonstrate sustainability leadership
- Maintain competitiveness
- Improve productivity and ensure more efficient use of our energy and environmental resources
- Unlock potential energy and environmental cost savings
- Reduce greenhouse gas emissions and other environmental impacts
- Reduce exposure to future energy price increases
- Improved risk management, including fulfilling compliance obligations (e.g. EED, customers)
- Reduce maintenance costs and improve reliability
- Empower and educate senior management
- Reduce employee turnover and provide other benefits
#EMS10Steps

1. **Scope & Requirements**
   - Needs of interested parties
   - Scope of EMS

2. **Leadership & Commitment**
   - Top management commitment
   - Policy
   - Roles, responsibilities and authorities

3. **Risk & Opportunities**
   - Determine legal & other requirements
   - Determine significant aspects; energy review, risk & opportunities

4. **Objectives and Planning**
   - EMS objectives and improvement plans

5. **Support**
   - Resources needed including technical, financial & human
   - Competence & awareness
   - Communication
   - Documented information

6. **Operation**
   - Operational planning & control
   - Emergency preparedness & response

7. **Monitoring & Measurement**
   - Monitoring, measurement, analysis and evaluation

8. **Risk & Opportunities**
   - Evaluation of compliance
   - Internal audit

9. **Management Review**
   - Management review

10. **Improvement**
    - Nonconformity and corrective action
    - Continual improvement

**Deutsche Post DHL - GLOBAL**
12,632 sites, of which 59% ISO certified
- 49% certified by ISO 14001
- 51% certified by ISO 50001
- 41% certified by both

Source: DHL Supply Chain #EMS10Steps
THANK YOU
Questions?