

# ENERGY INDUSTRY

## EU ENERGY CHALLENGES

The energy industry is currently facing major concerns, particularly in Europe. Climate change, Covid and now the war in Ukraine represent key accelerators that demand industry disruption and transformation. Sanctions against Russia impact the energy supply and place many EU member states at risk. To successfully navigate these challenges, countries must find ways to reduce consumption and minimize energy dependence on Russia through the diversification of energy sources and other strategic actions. At the same time, countries must work to build more resilient energy supply networks and formulate more sustainable energy plans.

## INTELLIGENT SOLUTIONS

X-ACT® helps users navigate complex decisions and find the right balance between competing objectives. With a digital twin that replicates energy supply networks and supports robust scenario analysis, EU energy authorities can use X-ACT to optimize energy consumption, find opportunities to diversify energy supplies and verify which actions will improve network resilience. Example uses of X-ACT:

- Evaluate which reductions in gas consumption will yield the optimal results (e.g., reduce thermostats by 1°C or invest in eco-buildings)
- Verify which mix of restrictions or slowdowns in industry activities will help avert gas shortages
- Identify best shipping routes for liquefied gas

## X-ACT DIGITAL TWIN

STRATEGIZE  
OPTIMIZE  
TRANSFORM



IDENTIFY  
THE BEST FIT  
SOLUTION

FIND  
ANSWERS  
TO COMPLEX  
QUESTIONS





**PREPARE  
FOR WHAT'S  
NEXT**



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MORE**



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## NEW OPPORTUNITIES

Unknown risks impede efforts to pursue new opportunities to overhaul energy supply systems or change policy in real time. It is difficult to anticipate the consequences of highly critical energy decisions due to the complexity of supply systems and impact on economy. Through digital prototyping, users of X-ACT can better understand the expected outcome and potential risk of decisions—even for events that have never happened.

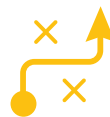
By changing model parameters—such as consumption rates, energy sources, routing of energy or replacement of system components—users of X-ACT can find scenarios that cause problems or improvements. Example uses of X-ACT what-if analysis:

- Plan transformations to meet Green Deal, decarbonization and other climate change targets
- Secure energy supplies against evolving threats (cyber-attacks, wars)
- Optimize use of energy through decentralization and digitalization strategies



## COMMON USES

Over the last 20 years, URM GROUP has helped industries overcome problems and solve complex challenges like those that the energy sector is now facing.



### GAIN INSIGHTS

Solve problems before they occur and avoid unwanted outcomes



### OPTIMIZE SYSTEMS

Find opportunities to improve dependability and economics of supply systems



### PLAN FOR THE FUTURE

Be confident in the benefit of plans before committing to changes