

Presentation of the Energy Efficiency Rating of Grid Companies

KEY CONCLUSIONS

Energy efficiency ratings stimulate companies' development and improve the quality of their services

"The main goal of rating the energy efficiency of grid companies is identifying best practices, sharing experiences, and developing standards based on these best practices. That's why Tyumenenergo considers the rating to be an instrument for stimulating further energy efficiency. <...> The main indicator of a grid company's effectiveness is the level of grid losses. Every year, companies develop a series of initiatives aiming to lower losses. These events are not just organizational or technological, some of them also focus on improving commercial and technical tracking systems. That's why reducing grid losses is of greatest interest to us", — Andrey Bragin, First Deputy General Director – Chief Engineer, Tyumenenergo

"IDGC of Centre and IDGC of Center and Volga Region are successfully implementing energy saving and energy efficiency programs. The energy saving program is a key part of the energy management system and is implemented in every subdivision of the company, all the way down to the district grid level. Moreover, its results are tied into the personnel motivation system, which allows for the company's employees to be more invested in the implementation of energy saving initiatives", — Alexander Pilyugin, First Deputy General Director – Chief Engineer, IDGC of Centre

"First of all, the Energy Efficiency Rating of Grid Companies demonstrates industry trends in reducing losses. It allows each person to compare their results with their industry colleagues. The very fact that comparison is possible makes this instrument very unique. However, it's important to realize that these ratings can only have a direct effect on the work of a concrete power grid company if the heads of the enterprise, being, say, unhappy with their position in the ratings, hold a postmortem with specialists. And then they formulate a plan, that will, on the one hand, allow the enterprise to occupy a more attractive place in the ratings, and, on the other hand, save the enterprise money. In general, the rating is an instrument to stimulate companies to maximize their energy saving

potential”, — Valery Presnyakov, Editor-in-Chief, Power and Industry of Russia Newspaper

Implementing strategic energy efficiency solutions reduces power loss

“In the last five years, we’ve started to see a stable trend towards reducing power loss <...> The results of 2017 show that the reduction was equal to 16 billion kilowatt hours <...> In the next three years, we need to reach 8.8%, in other words, our loss reduction needs to be doubled, at a minimum”, – Dmitriy Mikheev, Deputy Director of Electric Power Industry Development Department, Ministry of Energy of the Russian Federation

“In the last three years, without referring to any ratings, we made serious progress towards increasing efficiency. The result was a twofold reduction in losses, a tenfold improvement in our SAIDI and SAIFI scores, and two years without any expired agreements <...> Speaking generally, here’s how such a result is attainable. First – this needs to be an executive-level priority, second – analysis: what needs to be done, where, and how? After that is where the key initiatives and personnel motivation must come in”, — Nikolay Zuyev, General Director, Krasnoyarsk Regional Energy Company

“Increasing energy efficiency is one of the priority objectives in our field, and that includes electricity loss issues <...> This means developing long-term commodity programmes that attract investment, establishing and preserving trust with the power supply company and electricity consumers, integrating cutting-edge Russian and foreign technologies and equipment and tracking electricity in the most general sense of the word. <...> Integrating metering devices with remote data collection in the work of personnel, installing tracking measures on building facades <...> Smart grids have allowed us not only to increase the efficiency of the grid, but also to reduce the company’s expenditures”, — Ilshat Galimzianov, Deputy General Director – Technical Director, Grid Company

PROBLEMS

Insufficient tracking technologies and market stimuli towards increasing energy efficiency

“The lack of compatibility between different manufacturers’ metering devices is a problem. There need to be changes made to the federal standards that require metering device manufacturers to make sure that their devices work according to one, standardized exchange protocol. Second, the lack of standards for electricity

consumption, stimulating a transition to calculations based on metering devices <...> Defining opportunities for unplanned inspections, it would be nice to have this included in law”, — Yury Andreenko, General Director, Far-Eastern Grids Company

“First is the lack of unity in information systems, which are integrated with each other to varying extents. Grid schematics are entered by hand, and then often added to in AICs. It exists, but at the same time, there is practically nowhere where losses are factored into the calculations. And the losses come from two sources – from situations where we’re really undergoing a power loss and losses due to process standards or calculation errors. The issue is how well are we calculating these process losses <...> what share of process losses are truly being lost <...> We need to study this topic, without understanding this issue, we won’t know how much we need to decrease our losses, where the zero point is”, — Alexander Pilyugin, First Deputy General Director – Chief Engineer, IDGC of Centre

“The majority of actions taken to minimize losses are commercial loss measures, the process portion is somewhere around 30% <...> It might be worth increasing the value of the phrase ‘energy efficiency’, not to chalk it all up to grid losses, as the electric grid complex does <...> The issue is that the energy efficiency market is not currently functional, even though work in increasing energy efficiency is being done”, — Aleksandr Borisov, Member of the Presidium of the Management Board, Chairman of Committee on Energy Efficiency and Energy Saving, All-Russian Non-Governmental Organization of Small and Medium-Sized Businesses Opora Russia

SOLUTIONS

Implementing smart metering systems

“This year, the Yelabuzhsky District in Tatarstan saw the installation of 5,400 smart meters. <...> The company’s development and implementation of international best practices, based on, among other things, Russian algorithms and equipment, requires, on the one hand, significant expenditures, but, on the other hand, the results of the implementation, as experience has shown, are positive. The company considers its transition to smart digital metering to have been the proper and logical decision”, — Ilshat Galimzianov, Deputy General Director – Technical Director, Grid Company

“Practically 97% of the transmission volume of our grid is high voltage, and both low and mid voltage occupy 1.5% each <...> In previous years we focused specifically on metering, and the reliability of data, so that we could make decisions that directly affected loss reduction, and we did this specifically for high voltage transmissions. <...> Now that we have more detail about our distributed grid, we are investing funds into intelligent metering of distributed grids, which is more cost-effective when it comes to loss reduction”, — Andrey Bragin, First Deputy General Director – Chief Engineer, Tyumenenergo

Sharing best energy efficiency practices

“We need to create mechanisms and conditions based on, for example, this rating, turn it into a knowledge base, for gaining and developing competencies, so that specialists, when they perform an in-depth analysis of the parameters the rating accounts for, they could enter their practices into this knowledge base and learn from the experiences of others in similar situations <...> We and the Ministry are ready to make a knowledge base out of this rating, a platform for developing electrical grid companies’ competencies in both increasing energy efficiency, and maybe even along a broader agenda”, — Alexey Khokhlov, Head of the Electric Power Sector, Moscow School of Management SKOLKOVO