нение с аналогичными туристическими кластерами в других регионах, чтобы оценить эффективность и конкурентные преимущества. Оценка синергетического эффекта должна быть комплексной и охватывать все аспекты деятельности кластера – экономические, социальные и экологические.

Оценка синергетического эффекта от создания туристического кластера — это необходимый шаг для определения его вклада в развитие региона и оценки эффективности инвестиций. Результаты оценки могут быть использованы для корректировки стратегии развития кластера и повышения его конкурентоспособности.

Систематическая оценка синергетического эффекта является необходимым элементом управления развитием туристических кластеров и позволяет оптимизировать их деятельность для достижения максимальной отдачи и устойчивого роста.

УДК 658.5.012.1(332.14)

## USING THE BACCM™ MODEL TO DESCRIBE THE BASIC CONCEPTS OF CHINA'S ENERGY INDUSTRY

O. Vinnik, Xie Zhanlei

Sukhoi State Technical University of Gomel, the Republic of Belarus

The relevance of using business models for energy companies is substantiated, the levels and directions of energy digitalization are considered, six concepts of the basic concepts of business analysis (BACCM) model in relation to the Chinese energy sector are considered.

**Keywords:** energy industry, digitalization, business analysis, Basic Concepts of Business Analysis Model (ACM), change, necessity, solution, stakeholders, value, context.

# ИСПОЛЬЗОВАНИЕ МОДЕЛИ ВАССМ™ ДЛЯ ОПИСАНИЯ БАЗОВЫХ ПОНЯТИЙ ЭНЕРГЕТИЧЕСКОЙ ОТРАСЛИ КИТАЯ

О. Г. Винник, Се Чжанлей

Учреждение образования «Гомельский государственный технический университет имени П. О. Сухого», Республика Беларусь

Обоснована актуальность использования бизнес-моделей для энергетических компаний, рассмотрены уровни и направления цифровизации энергетики, шесть понятий модели базовых понятий бизнес-анализа ( $BACCM^{TM}$ ) применительно к энергетическому сектору Китая.

**Ключевые слова:** энергетическая отрасль, цифровизация, бизнес-анализ, Basic Concepts of Business Analysis Model (BACCM), перемены, необходимость, решение, заинтересованные стороны, ценность, контекст.

The process of energy industry digitalization in many countries began many years ago and is currently actively developing with the use of modern technologies. The introduction of digital technologies is possible at various levels and in various directions. Let's highlight the main directions:

- Digitalization of technological processes of energy production, transmission and distribution;
- Digitalization of business processes of generating companies and companies engaged in energy transmission to consumers;
  - Digitalization of resource management;
  - Digitalization of quality control and safety;
  - Digitalization of company management.

Let's highlight the main levels

- Digitalization at the level of the company's division, for example, fuel preparation;
- Digitalization of production and management processes at the level of an individual company;
  - Digitalization of the management of the energy system of the state as a whole.

Increasing energy sustainability requires changes not only in infrastructure, for example, modernization of transmission networks, but also modernization of management processes at various levels.

For a clear understanding of business processes and the possibility of conducting business analysis, specially developed models are used, among which one of the most well-known is the Basic Concepts of Business Analysis Model (BACCM), which forms the conceptual framework of business analysis. It describes what business analysis is, and what it means for those who perform business analysis tasks regardless of perspective, industry, methodology, or organizational level [1]. The model includes six basic concepts: change, need, solution, the stakeholder, the value, and the context (Figure). Each of these concepts is equivalent and represents an essential idea for business analysis.

#### The Business Analysis Core Concept Model (BACCM) Change Transformation Solution driven by a Need A specific way of satisfying a Need Need Problem or Opportunity Context The circumstances Stakeholder surrounding a Change Has a relationship to the Change, Need, or Solution Value The worth of something to a Stakeholder

Fig. 1. Six basic concepts of the Basic Concepts of Business Analysis Model

Consider using the BACCM<sup>TM</sup> model for the Chinese energy industry. From the point of view of the business analysis of the energy industry, the six basic concepts can be presented as follows:

#### 1. Changes

Due to the strengthening of China's environmental policy and the adjustment of the types and structure of fuel and energy resources used and energy consumed, many regions have implemented the Coal to Electricity project, which involves replacing traditional coal-fired heating with electric. This process includes changes in many aspects, such as upgrading the power grid, replacing power equipment, improving the reliability and stability of power supply, and changing consumer habits regarding electricity.

#### 2. Need

Due to the constant increase in electricity consumption in industry, commerce and residential buildings, consumer demand for energy products is constantly growing. The

growing volumes of consumption and, consequently, electricity generation require identifying and meeting this demand by strengthening power supply systems, increasing the efficiency of electricity production and introducing emergency power supplies to ensure stable power supply.

#### 3. Solution

To cope with the growing demand for electricity and the transformation of the energy structure, energy companies can implement smart grid solutions. Smart grid provides intelligent management and optimized planning of the power system using advanced communication and information technologies, increasing the reliability and efficiency of the power system.

#### 4. Stakeholders

The government is the entity that forms the general policy of transformation, develops the legislative framework, controls the process of modernization of the energy structure and environmental protection.

Energy generating and energy marketing companies are entities that produce and supply electricity. They develop and implement projects to increase the efficiency of electricity production and reduce the cost of its implementation.

*Energy consumers* are subjects-consumers of electricity. Of particular interest to them are the price, quality of electricity and reliability of energy supply.

*Environmental organizations* are environmental protection entities. They are concerned about the environmental impact of electricity generation processes and are interested in minimizing the effects of energy production on the environment and directly on people.

Each of these stakeholders has their own interests and concerns in connection with the transformation of the energy industry, which require business analysts to take full account and coordinate when developing solutions.

#### 5. Value

For the *government*, the implementation of projects to improve the reliability and efficiency of the energy sector means increasing the efficiency of the national economy, the quality of life of the country's citizens, improving the environment, and contributing to sustainable development;

For *energy companies*, increasing the value of an enterprise can be achieved by increasing the efficiency of electricity production, reducing operating costs and expanding value-added services.;

For *electricity consumers*, obtaining reliable, stable and inexpensive electricity supply can improve their quality of life and production efficiency;

For *environmental organizations*, the environmentally friendly development of energy helps to reduce environmental pollution and improve the quality of life of people.

#### 6 Context

From the point of view of the political environment, the orientation of government policy towards the transformation of the energy structure and environmental protection will affect the direction of development of the electric power industry; from the point of view of the market environment, factors such as the competitive environment in the electricity market, changes in demand and supply of electricity will affect the business strategies of energy companies; From the point of view of the technological environment, the development and application of new technologies such as smart grids, distributed energy and energy storage technologies will contribute to transformation and innovation in the energy industry.

Thus, the following conclusions can be drawn. Currently, China's energy sector is rapidly developing and modernizing, undergoing significant changes. With the development of digitalization, the role of business analysis tools in this area is increasing. Business analysis systems have become a key tool for improving the efficiency of energy com-

panies and making informed management decisions. The application of the BACCM model will allow you to identify the key points of business analysis. In the future, the use of special business process modeling and business analysis tools will optimize production processes, improve resource management, predict supply and demand, control product quality and safety, improve the environment and improve the quality of life of citizens. This allows us to meet the needs of all stakeholders.

Reference

1. BABOK V3. A GUIDE TO THE BUSINESS ANALYSIS. BODY OF KNOWLEDGE IIBA: International institute of business analysis. URL: https://bpmtraining.net/wp-content/uploads/2018/10/BABOK Guide v3 Member.pdf.

УДК 338.3

# НАПРАВЛЕНИЯ РЕАЛИЗАЦИИ ЭНЕРГЕТИЧЕСКОЙ ПОЛИТИКИ РЕСПУБЛИКИ БЕЛАРУСЬ

М. Д. Ятченко

Учреждение образования «Гомельский государственный университет имени Ф. Скорины», Республика Беларусь

Основные направления развития электроэнергетического сектора проявляются в обеспечении существенного повышения эффективности производства энергии и надежности энергоснабжения, т. е. обеспечение потребностей экономики и населения страны в энергоносителях на основе их максимально эффективного использования при снижении нагрузки на окружающую среду.

Ключевые слова: энергетическая политика, энергоэффективность, энергобаланс.

# DIRECTIONS OF IMPLEMENTATION OF ENERGY POLICY OF THE REPUBLIC OF BELARUS

M. D. Yatchenko

Gomel State University named after F. Skorina, the Republic of Belarus

The main directions of development of the electric power sector are manifested in ensuring a significant increase in the efficiency of energy production and reliability of energy supply, meeting the needs of the country's economy and population for energy resources based on their most efficient use while reducing the burden on the environment.

**Keywords:** energy policy, energy efficiency, energy balance.

Главным приоритетом энергетической политики и стратегии в Республике Беларусь является обеспечение надежного и устойчивого энергоснабжения национальной экономики, одновременно снижая зависимость от импорта энергии и улучшая финансовую устойчивость сектора. Как возобновляемая энергия, так и энергоэффективность были определены в качестве приоритетов для достижения этих целей; однако большая часть изменений в энергетическом секторе будет связана с новой атомной электростанцией, которая уже введена в эксплуатацию.

С начала 1990-х гг. в Беларуси реализуется последовательная государственная политика, направленная на повышение энергоэффективности экономики, включающая создание нормативно-правовой базы, институциональной инфраструктуры, механизмов государственной поддержки и стимулирования, системы ключевых пока-