інфраструктури;

- надання фінансової підтримки науковим інститутам для проведення НДДКР;

- забезпечення ефективної взаємодії з науковими організаціями, малими та середніми інноваційними компаніями.

Таким чином, створення необхідних умов для формування в Україні моделі інноваційної економіки не лише дозволить подолати кризові явища, а й забезпечити довгострокове економічне зростання та підвищити її конкурентоспроможність у світовій економіці.

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INVESTMENT AND ENERGY PRODUCTIVITY TRENDS IN THE US

Over the past forty years, the United States made significant gains in energy productivity. U.S. economic output expanded more than three times since 1970 while demand for energy grew only 50%. The gains markedly accelerated after the oil shocks of 1973 and 1979 brought focus on America's energy demand and vulnerability to energy supply disruptions. The oil shocks prompted a variety of policies at the state, national, regional, and local levels and actions by governments, companies, and nonprofit organizations.

On a per capita basis, U.S. energy productivity and efficiency gains have muted the growth in energy use that might be expected as Americans have become more prosperous. Despite the growth in average home size, more and bigger vehicles driven more miles, and the rapid growth in all kinds of energy-consuming devices, from air conditioners to computers to air travel, energy used per American has actually decreased over the last several decades. In 1970 Americans consumed the energy equivalent of about 2,700 gallons of gasoline per person for all uses of energy. That rate of consumption

extrapolated to our current economy would have come to the equivalent of about 5,400 gallons per person. Instead, 2014 consumption was the equivalent of 2,500 gallons per person.

Energy efficiency measures, investments, and behaviors are, however, not the only factors contributing to the increase in energy productivity over the last few decades. Other factors driving this improvement include changes in the nation's economic structure toward greater activity in less energy intensive industries, outsourcing of some heavy industries, general forces that drive technological advances that have improved energy productivity as a byproduct, demographic changes such as population migration to warmer regions with less winter heating needs, and volatile energy prices.

These economic changes have affected the buildings, transportation, and industrial sectors.

Today, residential and commercial buildings account for about 41% of total U.S. energy consumption. Building-sector energy consumption grew by 48% between 1980 and 2012. Although energy use in buildings has increased since 1970, it has done so at a rate slower than the growth of GDP. In residential buildings, a large portion of this increased energy use is due to the growing use of home electronics as well as the increase in total floor space in buildings and average square footage per home as well as demand for other energy services. However, the development and adoption of appliance efficiency standards as well as utility and government sponsored demand-side management (DSM) programs has helped alleviate the impact. For instance, energy consumption per unit of floor space has declined by 11% for residential and 21% for commercial buildings since 1980. While the numbers are not adjusted for structural changes, many studies point to energy efficiency playing a role in this reduction.

Overall, energy use in the U.S. transportation sector has risen with only brief periods of decline during economic recessions. In the decade following the adoption of Corporate Average Fuel Economy (CAFE) standards in 1975, no policies at either the state, local, or national level encouraged, much less required, fuel economy improvements, and as a consequence, efficiency stagnated.

From 1985 to 2013, industrial sector GDP increased by more than 60%, while industrial energy use rose only 12%. Structural changes have had a significant effect on this sector's energy use because the fraction of the economy derived from manufacturing,

especially energy-intensive manufacturing (such as iron and steel, cement, aluminum, and paper products), has decreased significantly. A substantial portion of the economy is now focused on services and information technologies, as well as lighter industries, many of which did not exist in the 1970s. Some of the energy-use decrease is also due in part to the outsourcing of the production of more energy-intensive products, such as steel and iron. However, the manufacturing and broader industrial sectors have become more energy productive as more energy- and material-efficient processes and systems have been implemented.

For instance, the American iron and steel industry has undergone significant restructuring with a lower proportion of production from more energy-intense plants making steel from iron ore and coke and a greater proportion processing scrap steel via electricarc furnaces. Improved processes, more efficient motors and other equipment, better energy management practices, and the application of information technologies to industrial process controls have increased manufacturing energy productivity.

Federal policies have made modest contributions to promoting increased industrial efficiency with much of the activity being limited to research and development (R&D). Voluntary, non-incentivized programs at the Environmental Protection Agency (EPA) and the Department of Energy (DOE) have supplemented R&D, including technical assistance, such as DOE-supported University based Industrial Assessment Centers. Activity has also occurred at the state level, through information programs run by state energy offices. Further, some states' utility energy efficiency programs have included industrial efficiency components. Additionally, electricity supply-side programs to encourage nonutility generation passed by Congress in 1978 helped create new combined heat and power (CHP) production. These types of industrial programs, however, have generally not been first priority compared to other sectors.

At the end of August 2012, industrial efficiency, primarily CHP, received a boost through the signing of an Executive Order 13624 by President Obama. The executive order has the overarching goal of accelerating investment in industrial energy efficiency and aims to do so through the following mechanisms:

•Convene stakeholders to identify, encourage and develop investment models and best practices for CHP and industrial efficiency;

•Provide technical assistance and public information on benefits;
•Use existing federal authorities to support investment.

The executive order also directs various agencies and departments to “encourage efforts to achieve a national goal of deploying 40 gigawatts of new, cost effective industrial CHP in the U.S. by the end of 2020.” According to the White House, this goal would “save energy users $10 billion per year” and “result in $40-$80 billion in new capital investment in manufacturing and other facilities.” In the next decade, manufacturers could save upward of $100 billion in energy costs due to increases in industrial efficiency.

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ОСОБЛИВОСТІ ФОРМУВАННЯ ІННОВАЦІЙНОГО ПІДПРИЄМНИЦТВА В ЗАЛЕЖНОСТІ ВІД ВИМОГ ЗОВНІШНЬОГО СЕРЕДОВИЩА

Для проведення заходів щодо активізації інвестиційних процесів на підприємствах України спочатку потрібно здійснити їх аналіз за схемою зверху вниз», починаючи з мегарівня (рівня країни) з метою дослідження характеру і стану інвестиційного клімату країни, збільшення об'ємів державного інвестування при посиленні його цільової спрямованості, заохочення інвестиційної діяльності суб'єктів господарювання шляхом створення плану дій щодо формування сприятливого інвестиційного клімату

В економіці інноваційного типу, наука є першою і визначальною складовою у інноваційному процесі: проектування, виготовлення, продаж тощо [1]. Знання — основа і початок матеріальної діяльності людини — річ ідеальна, досягнення всього людства та начебто не є об'єктом ринкових відносин.

Наука як специфічна галузь діяльності людини виконує, відповідно до її природи, дві нероздільні функції: перша — накопичення нових знань про навколишній світ, природу речей і явищ, друга — створення інструментарію для перетворення навколишнього середовища. Відповідно до названих функцій існують два основні типи наукових установ: перші займаються переважно фундаментальними дослідженнями, другі — прикладними дослідженнями.