



Nazwa modułu: Energy policy

Rok akademicki: 2013/2014      Kod: SEN-2-107-SE-s      Punkty ECTS: 3

Wydział: Energetyki i Paliw

Kierunek: Energetyka      Specjalność: Sustainable Energy Development

Poziom studiów: Studia II stopnia      Forma i tryb studiów: Stacjonarne

Język wykładowy: Polski      Profil kształcenia: Ogólnoakademicki (A)      Semestr: 1

Strona www: —

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## Opis efektów kształcenia dla modułu zajęć

Kod EKM	Student, który zaliczył moduł zajęć wie/umie/potrafi	Powiązania z EKK	Sposób weryfikacji efektów kształcenia (forma zaliczeń)
Wiedza			
M_W001	The student knows the basics of theoretical background of energy policy development (including principles, objectives, legal aspects, entities responsible for energy policy). The student understands how energy policy instruments contribute to the development of energy systems. The student understands the problem of energy security and knows how key energy security indices are constructed.	EN2A_W20	Aktywność na zajęciach, Kolokwium

M_W002	The student knows conditions that determine the development of energy policy, which results from the specificity of domestic fuel and energy market (oil, natural gas, coal and lignite, renewable energy, electricity, heat). The student knows main objectives of the Polish energy policy until 2030 (adopted by the Government) and key instruments of energy policy implemented in Poland. The student understands the European context of national energy policy and understand the environmental context of energy policy.	EN2A_W20	Aktywność na zajęciach, Kolokwium
Umiejętności			
M_U001	The student can: - justify the need for energy policy development; - list and describe the functioning of key energy policy instruments; - describe key objectives of the Polish Energy Policy until 2030, justify the selection of energy policy instruments to achieve these objectives; - list and describe the renewable energy development support schemes; - calculate selected indicators of energy security and energy intensity of GDP and interpret the results; - search for related scientific papers and use correct terminology in the field of energy policy.	EN2A_U16, EN2A_U17	Aktywność na zajęciach, Kolokwium
M_U002	The student can carry out an analysis and on this basis develop a presentation on the energy policy of a selected country. The student can compare the energy policy of the country in question with the energy policy of Poland. The student can present the key results of the analysis and logically answer the questions asked by the lecturer and other students.	EN2A_U16, EN2A_U17	Aktywność na zajęciach, Prezentacja, Udział w dyskusji
Kompetencje społeczne			
M_K001	The student contributes constructively to the work carried out by the team that solves the problem of the energy policy of the selected country.	EN2A_K01, EN2A_K03, EN2A_K05	Udział w dyskusji, Zaangażowanie w pracę zespołu
M_K002	The student contributes constructively to the discussion in the seminar classes and logically formulates arguments.	EN2A_K01, EN2A_K03, EN2A_K05	Udział w dyskusji, Zaangażowanie w pracę zespołu

## Matryca efektów kształcenia w odniesieniu do form zajęć

Kod EKM	Student, który zaliczył moduł zajęć wie/umie/potrafi	Forma zajęć										
		Wykład	Ćwiczenia audytoryjne	Ćwiczenia laboratoryjne	Ćwiczenia projektowe	Konwersatorium	Zajęcia seminaryjne	Zajęcia praktyczne	Inne	Zajęcia terenowe	Zajęcia	E-learning
Wiedza												

M_W001	The student knows the basics of theoretical background of energy policy development (including principles, objectives, legal aspects, entities responsible for energy policy). The student understands how energy policy instruments contribute to the development of energy systems. The student understands the problem of energy security and knows how key energy security indices are constructed.	+	-	-	-	-	-	-	-	-	-	-
M_W002	The student knows conditions that determine the development of energy policy, which results from the specificity of domestic fuel and energy market (oil, natural gas, coal and lignite, renewable energy, electricity, heat). The student knows main objectives of the Polish energy policy until 2030 (adopted by the Government) and key instruments of energy policy implemented in Poland. The student understands the European context of national energy policy and understand the environmental context of energy policy.	+	-	-	-	-	-	-	-	-	-	-
Umiejętności												
M_U001	The student can: - justify the need for energy policy development; - list and describe the functioning of key energy policy instruments; - describe key objectives of the Polish Energy Policy until 2030, justify the selection of energy policy instruments to achieve these objectives; - list and describe the renewable energy development support schemes; - calculate selected indicators of energy security and energy intensity of GDP and interpret the results; - search for related scientific papers and use correct terminology in the field of energy policy.	+	-	-	-	-	-	-	-	-	-	-

M_U002	The student can carry out an analysis and on this basis develop a presentation on the energy policy of a selected country. The student can compare the energy policy of the country in question with the energy policy of Poland. The student can present the key results of the analysis and logically answer the questions asked by the lecturer and other students.	-	+	-	-	-	-	-	-	-	-	-
Kompetencje społeczne												
M_K001	The student contributes constructively to the work carried out by the team that solves the problem of the energy policy of the selected country.	-	+	-	-	-	-	-	-	-	-	-
M_K002	The student contributes constructively to the discussion in the seminar classes and logically formulates arguments.	-	+	-	-	-	-	-	-	-	-	-

## Treść modułu zajęć (program wykładów i pozostałych zajęć)

### Wykład

- 1.Theoretical background of energy policy development – definitions, objectives, principles, legal aspects, entities responsible for development of energy policy
- 2.Energy policy instruments
- 3.Energy security and key energy security indices
- 4.Energy intensity of GDP production
- 5.Determinants influencing energy policy of a given country related to fuel and energy markets
- 6.Energy policy aimed to support the development of Renewable Energy Sources
- 7.Energy policy aimed to liberalise energy markets

### Ćwiczenia audytoryjne

Development of a presentation on energy policy of a given country. Geopolitical situation that determines the national energy policy is analysed. The student analyses the instruments of energy policy that are introduced in a given country and calculates energy security and energy intensity indices. Then author's evaluation of the national energy policy is carried out. Seminars are devoted to the presentation of the main findings/results. After the presentation a presenter answers the questions asked by the lecturer and other students.

### Sposób obliczania oceny końcowej

Mark in classes (S) and mark in exam (E) are calculated as follows: the percentage of obtained points is converted to the mark in accordance with the approved AGH Regulations.

The final mark (OK) is calculated as a weighted average of the following marks:

$$OK = 0,5 \cdot w \cdot E + 0,5 \cdot w \cdot S$$

w = 1 for the 1st term, w = 0,9 for the 2nd term, w = 0,8 for the 3rd term

### **Wymagania wstępne i dodatkowe**

Nie podano wymagań wstępnych lub dodatkowych.

### **Zalecana literatura i pomoce naukowe**

1. Energy Policies of IEA Countries. International Energy Agency (IEA/OECD). Paris 2011. ([www.iea.org](http://www.iea.org))
2. Energy Policy of Poland until 2030 – Document approved by the Government. Ministry of Industry. Warsaw 2009.
3. National Renewable Energy Action Plan 2009-2012. Minister of Economy, Warsaw 2010.
4. Radetzki M., 2004. How to Determine the Reach of a Socially Optimal Energy Policy? Minerals and Energy. Vol. 19, No 3, 2004; 15-24.
5. Helm D., 2002. Energy policy: security of supply, sustainability and competition. Energy Policy 30 (2002) 173-184.
6. Egmond C., Jonkers R., Kok G., 2006. One size fits all? Policy instruments should fit the segments of target groups. Energy Policy 34 (2006) 3464-3474.
7. Energy Policy, international journal, available at [sciencedirect.com](http://sciencedirect.com)
8. Energy, international journal, available at [sciencedirect.com](http://sciencedirect.com)
9. Applied Energy, international journal, available at [sciencedirect.com](http://sciencedirect.com)
10. Bartodziej G., Tomaszewski M., 2009. Energy policy and energy security (in Polish). (Polityka energetyczna i bezpieczeństwo energetyczne). Wydawnictwo Nowa Energia. Racibórz 2009.
11. Łucki Z., 2010. Energy policy instruments (in Polish). (Instrumenty polityki energetycznej). Polityka Energetyczna, Tom 13, Zeszyt 1. Wydawnictwo IGSMiE PAN, Kraków 2010.

### **Publikacje naukowe osób prowadzących zajęcia związane z tematyką modułu**

Nie podano dodatkowych publikacji

### **Informacje dodatkowe**

Brak

### **Nakład pracy studenta (bilans punktów ECTS)**

Forma aktywności studenta	Obciążenie studenta
Udział w wykładach	15 godz
Samodzielne studiowanie tematyki zajęć	28 godz
Udział w ćwiczeniach audytoryjnych	15 godz
Przygotowanie do zajęć	20 godz
Egzamin lub kolokwium zaliczeniowe	2 godz
Sumaryczne obciążenie pracą studenta	80 godz
Punkty ECTS za moduł	3 ECTS