CHAPTER I

INTRODUCTION
Regional cooperation and energy security are widely discussed areas of study from the last few decades. The concept of regional cooperation is getting unprecedented importance in the present global scenario. The growth of regional cooperation is one of the major developments in the world after the Second World War. This was initially the consequence of fear and security but later on, particularly after the decline of Soviet Union these organizations were based on economic cooperation and mutual prosperity. Thus the formation of regional organization has been greatly successful in bringing historically hostile countries together. Regional integration suggests that it is a process of positive interaction among national actors within a region to harvest political, economic and security benefits. Regional arrangements cover different potpourris of economic, social, political and security concerns and there are different forms of interaction between regionalization and various ways in which states may promote regional cohesion.

In the present era of regionalism, it has been observed that the rationalization and harmonization of regional economies across the world have started with cooperative ventures involving specific commodity sectors. In this respect, considering the critical role of energy in modern economies and the pernicious effects of any disruption thereby, it is imperative to ensure energy security for the well being of the people and the economy. The fact is that the world is moving on a totally unsustainable and ultimately unrealistic energy path, because of increasing fossil fuel consumption and demographic explosion. All mainstream scenarios suggest that global energy demand could rise by half as much again by 2030 with energy demand doubling in developing countries. The United Nations also predicts that global population will increase from the present 6.5 billion by an additional 2.5 billion by 2050, with most of this growth occurring in the developing world. The reserves of conventional fuels are not increasing as fast as the global demand. Many traditional production areas are in decline and the cost of oil and gas extraction is mounting alarmingly. The fact is that the supplies of fossil fuels will not increase in line with demand as has happened for the last twenty years. The International Energy Agency (IEA) among others has given adequate
warning and now the world has a responsibility to move towards a more sustainable energy future. This means the need for developing low carbon energy, clean eco-friendly technologies and improving energy efficiency.

**Statement of the Problem**

The success of European Union as a regional organization encouraged other regions to integrate themselves in their own spheres of influence. The fundamental urge for any regional cooperation arises out of security compulsions, pressures and threats, which may be affecting one or more than one country amongst the entire group of countries of the region. In a way the issue of energy security compelled the nations of different regions to form regional cooperation in energy, which can promote independence through interdependence. Energy security has always been an important issue in energy policy debates but it gained salience in the 21st century. Europe’s renewed interest in energy security has been influenced by both internal and external factors. Internally, steadily rising energy prices, declining European energy production and a fragmented internal energy market have contributed to anxieties over Europe’s ability to meet future energy demand. Externally, the strain on global demand exerted by the emerging economies such as China and India, persistent instability in energy producing regions, the threat of terrorist strikes against energy infrastructure, and Russia’s apparent willingness to use its energy power for political ends, are all raising concerns in Europe over how to address external influences that could affect future energy requirements. Recent calls for EU-wide energy coordination have been driven by rising European concern about the effects of energy production and consumption on global climate change. To this end, EU member states’ recent energy policy decisions centred largely on promoting energy efficiency, developing renewable energy and clean fuel sources, and reducing overall greenhouse gas emissions. In this backdrop, the present study focused on analyzing the integration process of the European Union and the policies adopted by the EU to ensure its energy security within the framework of the theory of neofunctionalism. For this purpose the study investigates: How does regional integration promotes energy security? Is there energy cooperation among EU member
states and at the Union level? What are the measures adopted by the EU to ensure energy security at the regional level? How the EU does connects its climate change mitigation strategy with energy policy?. To answer these questions it analyses evolution of the European Union, theories of European integration, internal energy policies, external dimensions of EU’s energy policy, energy cooperation in the EU etc.

**Background of the Study**

Regional cooperation is an important trend and key factor in international relations. The term regional cooperation refers to close interaction between that particular area which possesses geographical contiguity along with common socio-cultural and economic proximities, whereas regional organization stands for the common arrangement among the states. It includes sovereign states within a region, which have common interests. Generally regional cooperation is pursued through regional organization but it is not essential or a pre-condition for cooperation. The regional organization is an instrument to make the idea of regional cooperation operative. The advent of globalization and Information Communication Revolution gave a new dimension to the process of regional integration. Regional cooperation and integration has become a crucial element of the development process. In the light of the current developments in the rest of the world, it has become vitally important for the independent nations to map out a strategy of regionalism to face the challenges posed by powerful forces of globalization and lay the foundation for sustainable development in the twenty first century.

Since the Second World War regional cooperation in Europe has taken the form of a gradual process of integration which led to the formation of European Union in 1992. It was initially a purely West European creation between the original six member states born out of the desire for reconciliation between France and Germany in a context of ambitious federalist plans. Yet the process has taken the form of a progressive construction of an institutional architecture, a legal framework and a wide range of policies by encompassing 28 European States. The integration process of the EU has analyzed by different scholars on various occasions through an array of theories such as neorealism, functionalism,
neofunctionalism, constructivism, federalism, transactionalism and multi-level governance. In these theories Earnest Haas’ formulation of neofunctionalism stands prominent. It explains the European integration process through the spill over effect. The European Coal and Steel Community was created in 1951, followed by the European Economic Community and the European Atomic Energy Community in 1957. These treaties involved a conferral of community competence in various areas- the supra national management of steel and coal, the creation and regulation of an internal market and common policies in trade, competition, agriculture and transport. Since then, powers have been extended to include new legislative competence in some fields such as the energy. Since the 1992 Treaty on European Union (Maastricht Treaty) the integration process has also involved the adoption both of stronger forms of unification, notably Monetary Union, as well as other forms of cooperation such as non binding coordination in economic and environment policy or more inter governmental cooperation in foreign and security policy. From very limited beginnings, both in terms of membership and in terms of scope, the EU has therefore gradually developed to become an important political and economic actor whose presence has significant impact, both internationally and domestically.

Energy cooperation is a crucial area that needs to be enhanced through regional collaboration. It is evident that during periods of high inflation of energy resources, energy imports lead to negative effects on output, terms of trade, debt and even income distribution. Access to energy and their high costs become major restraining factors inhibiting future growth. Energy security has become a policy priority for the European Union and its 28 member states. The EU imports about 50 percent of its energy needs. Barring significant changes, the European Commission expects this figure to rise to 65 percent by 2030. European concern regarding the security of its energy supply was first prompted by the Arab oil embargo of the early 1970s. Specifically, the embargo highlighted three main issues. First, it exposed a need for increased energy policy collaboration among European countries and between Europe and the energy producing world. Second it became clear that institutional mechanisms for increased coordination
in the event of future supply disruptions were essential. Third, consensus emerged that Europe should prepare strategies to prevent it from becoming the victim of future attempts by exporting nations to use energy as a political or economic weapon. The 1974 creation of the International Energy Agency (IEA), which has become Europe’s primary instrument for monitoring and analyzing world energy markets, was one response to the embargo. In addition, European countries sought to develop strategies to diversify energy supply.

In 1991, the EU launched the Energy Charter Declaration, an initiative intended to promote energy cooperation and diversify Europe’s energy supply. The Declaration gave way to the 1994 Energy Charter Treaty that came into legal force in 1998 and established a framework of rules and agreements to promote international energy cooperation. The Treaty seeks to create a level playing field of rules regarding the promotion of foreign energy investments, free trade in energy materials, products and equipment, freedom of energy transit through pipelines and grids, promoting energy efficiency and providing mechanisms for addressing disputes. A 2005 German-Russian gas pipeline agreement and more recent Russian manipulation of gas and oil flows to the European market have sparked a new sense of urgency among European leaders regarding the need for a more coordinated strategy. These events correspond with growing concern among the European public and political classes regarding the link between energy production and consumption and global climate change.

EU Heads of State adopted a series of European Commission proposals that they expect will form the foundation of an energy policy for Europe. The adopted measures are among a larger group of recommendations the Commission laid out in the Green Paper of 2006 and a more detailed action plan was unveiled in 2007. The commission proposals focus on three broad interconnected goals: increasing European wide energy security, enhancing sustainability and fostering competition in Europe’s internal energy market. Commission officials place particular emphasis on the links between energy security, energy efficiency and the EU wide reduction in carbon emissions. The EU has traditionally exerted little if any influence over individual member state energy policy.
Decisions regarding long term oil or gas purchases, the development and improvement of energy related infrastructure and the use of particular fuels continue to be made at the national level by individual member states. However, in the face of increasing concern regarding Europe’s reliance over Russian energy resources and growing pressure to address global climate change EU member states agreed on a series of policy measures intended to form the foundation of an energy policy for Europe.

**Review of Literature**

Regional cooperation and energy security are two thrust areas of research in the global academic domain. The challenges of 21st century like hiking fuel prices, imbalance in the producing regions, climate change, sustainable development etc drew energy as a navigator for competition as well as for cooperation. Energy is the elixir of development and every country is taking firm endeavours to ensure energy security. At the regional level, regional organizations are taking steps to ensure energy security for the region and for its individual member states. They consider regional cooperation is an instrument in this line and gives vehemency on energy cooperation among the member states as well as outside the region. My research is to find out the connection between regional cooperation, energy security and energy cooperation in the European Union. Thus, the following is the review of an account of literature on related spheres.

Miroslav N. Jovanovic’s (2006) book *The Economics of International Integration* depicts the aspects of integration with in a global perspective. It put forward the economic motives and aspects that lead to integration at different regions of the world. Ramgopal Agarwala and Brahm Prakash (2006) highlight the challenges and the profits of regional cooperation in South Asia which is quite different from the European Union contexts. However, it helps to interpret diverse factors which contribute to regional cooperation. Rudi Guraziu (2008) critically investigated whether regionalism is a stumbling block or a stepping stone in the process of globalization. He portrays the development of regionalism, various aspects and its developing nexus with globalization in an elaborate mode.
Paul Gallis (2007) described various aspects of energy security and peep into the measures that have taken by NATO to ensure energy security to its member states. Imtiaz Alam (2006) outlined the factors and reasons that influence energy cooperation and forecasts energy cooperation in South Asia will ensure energy security in the region. Energy cooperation will facilitate to secure energy security in other parts of the world too.

Ernst B. Haas (1961) noted that integration among discrete political units is a historical fact in Europe and the progress of unity in Europe inevitably has its integrating repercussions in other regions. Lessons from the recent initiatives aimed at stimulating regional cooperation among transition economies in Northern, Central, and South-Eastern Europe was also well studied (Milica Uvalic 2002). Although these initiatives varied significantly in their scope, objectives, and domain of activity, he highlights the common elements and discusses both their major achievements and greatest weaknesses. Alex Warleigh-Lack (2006) argues that the divide between 'new' and 'old' regionalisms in international politics is increasingly seen as over inflated, but that the conceptual implications of this non-difference have yet to be taken seriously. The attempt to build a new body of theory to explain and describe recent forms of region-building- the 'New Regionalist Approach'- is mistaken, and falsely sets up classical integration theory as an ‘Other’ in an act of auto-definition.

Several researchers profoundly commented and expressed various theories and practices of regionalism in different parts of the world which provides multifarious views on regionalism (Yi Feng and Gaspare M. Genna 2003; Natasha Hamilton-Hart 2003; Roy Allison 2004; Annette Bohr 2004; Hadi Soesastro 2006; Deepak Nair 2009; Peter Drysdale and Shiro Armstrong 2010; Min-hyung Kim 2012).

The World Energy Assessment (2000) provides analytical background and scientific information for decision-makers at all levels. It describes energy’s fundamental relationship to sustainable development and analyses how energy can serve as an instrument to reach that goal. This report has been divided into four parts. Part 1 begins with an introduction to energy, especially its relationship to economic development.
Part 2 examines the energy resources and technological options available to meet the challenges identified in part 1. Part 3 synthesizes and integrates the material presented in the earlier chapters by considering whether sustainable futures which simultaneously address the issues raised in part 1 using the options identified in part 2 are possible. Part 4 analyses policy issues and options that could shift current unsustainable practices in the direction of sustainable development.

Ji Guoxing (1998); Gawdat Bahgat (2005); Zha Daojiong (2006); Dimitrios Triantaphyllou (2007); Masahiro Atsumi (2007), Chen Fengying and Ni Jiejun (2008); Tracey C. German (2009) and Kuralai I. Baizakova (2010) reviewed energy security in different countries and regions across the world which points out the ever increasing role of energy in the daily activities of each and every country and it affirms the significance of energy security and searches ways and means taken by countries and regions to ensure energy security.

Jose Goldemberg, Thomas B. Johansson, Amulya K. N. Reddy and Robert H. Williams (2001) argues that energy must become an instrument for advancing sustainable development-economically viable, need-oriented, self-reliant and environmentally sound development-and that the focus should be on the end uses of energy and the services that energy provides. I. Fells (2005) evaluated the current state of nuclear energy programmes and investment and some other energy issues in the EU and conclude that nuclear energy is indispensable and a better option for the continued problem of global warming. John C. Gault (2006) overviewed critical issues in energy security that could affect globalization and global security which concludes with a series of policy recommendations for governments to improve the security of energy supply; to encourage adequate investment in energy infrastructure; and to minimize the likelihood of, and damage caused by, energy system breakdowns.

Joaquin Roy and Aimee Kanner (2006) and Dick Leonard (2005) limn chronological incidents and historical evolution of the EU and these are helpful for people interested in the affairs of European Union. Amber Curtis and Joseph Jupille (2011) reviewed the various stages of European integration and describe the European
Union as it exists today. Then they appraise past waves of EU scholarship, devoting particular attention to their explanatory priorities in terms of capturing the specificity and articulating the generality of the EU experience.

Finn Laursen (2002) accounted various theories of European Integration such as functionalism, neofunctionalism, intergovernmentalism, multilevel governance etc. Mark A. Pollack (2011) examined a body of theories- realism, intergovernmentalism, liberal intergovernmentalism, and rational-choice institutionalism- that together represent a distinctive family of approaches to the study of the EU. While these various theories are often depicted, correctly, as rivals in explaining particular developments in EU politics, they share an intellectual starting point in international relations. He argued that the theories grouped constitute a broad research program in EU studies, distinct from both constructivist and sociological analyses and multi-level governance approaches. Mark A. Pollack (2000) illustrates the theories of International relations and then concentrates on neofunctionalist and intergovernmentalist theories of European integration. Andrew Moravcsik and Frank Schimmelfennig (2009) argued that Liberal Intergovernmentalism has acquired the status of a baseline theory in the study of regional integration due to its theoretical soundness, empirical power and utility as a foundation for synthesis with other explanations.

William E. Fisher (1969) seeks to empirically study the relationship between political integration and social assimilation. He attempts to evaluate the utility of the socio-causal paradigm by deducing propositions from the paradigm and examining the congruence between these propositions and events in Western Europe from 1953 to 1964. Andrew Jordan (2001) critically canvasses the popular claim that the EU has evolved into a system of multi-level governance as opposed to state-led government. The ‘governance turn’ that has swept through European studies in the last 10 years has opened up substantial new avenues of inquiry as analysts have begun comparing the policy dynamics within and between sectors and levels of the EU.

Robert Jervis (1999) debated that the realist-neoliberal disagreement over conflict is not about its extent but about whether it is unnecessary, given states’ goals. In this
context we cannot treat realism as monolithic, but must distinguish between the offensive and defensive variants. Then he explains the disagreement in terms of what each school of thought believes would have to change to produce greater cooperation. Thomas Gehring (1996) looks into the common roots of neo-functionalism and regime theory and locates them in the middle ground between realism and legalism. It suggests that a closer focus on the impact of institutions for governance offers opportunities for a fruitful integration of the main approaches to European integration. Gerda Falkner (2011) indicates that there are two strategic moves the European Commission can use to actively overcome member state opposition: first, sidelining some or even all national governments; and, second, manipulating relevant policy preferences. These two basic strategies can be seen to interconnect the diverging basic assumptions of intergovernmentalism and neofunctionalism as ‘passerelles’.

George Tsebelis and Geoffrey Garrett (2001) presented a unified model of the politics of the European Union (EU). They focus on the effects of the EU’s changing treaty base—from the founding Rome Treaty (1958) to the Single European Act (SEA, 1987), the Maastricht Treaty on European Union (1993), and the Amsterdam Treaty (1999) on the relations among its three supranational institutions—the Commission of the European Communities, the European Court of Justice, and the European Parliament and between these actors and the intergovernmental Council of Ministers. According to Sergio Fabbrini (2012) the Lisbon Treaty has institutionalized a dual constitution, supranational in the single market’s policies and intergovernmental in economic, financial, foreign and defense policies.

Teodor Lucian Moga (2009) emphasized to what extent the two grand theories—neofunctionalism and intergovernmentalism—have underpinned and shaped the European integration process since the inception of what is today called the European Union. Simon Collard-Wexler (2006) detailed a panoramic view of the process of integration and the pacification of Western Europe as one of the most significant developments in international relations at the turn of the century and elucidates the difficulty of neorealism at explaining the EU.
Richard Young (2009) exposes the significance of external factors in the energy security of Europe. The increasing dependency of Europe on suppliers for securing its energy sources and searches for the diversification of energy sources and suppliers for the assurance of energy security was thoroughly analyzed (Peter Truscott, 2009). Vince L. Morelly (2006) and Paul Belkin (2008) revealed the challenges in front of Europe to procure energy security.

Ayse Beden (2007) and Jonathan Stern (2002) addresses the issues of security of supply, import dependence and liberalization. It also refers about the increasing importance of gas as a less carbon energy source. Martin Sivek, Pavel Kavina, Jakub Jirasek (2011) lists the most relevant reasons why the EU should promptly proceed to the discussion and preparation of a similar material of higher legal force for energy minerals. Basic problem areas of forming a political platform for the preparation of the EU energy initiative include the exploitation of domestic energy raw material deposits, raw materials diplomacy, and the matter of renewable sources.

Susanna Horn and Angelina Korsunova (2011) contributes to the understanding of developments in EU energy policy during 1995–2007, through examination of the process of its integration, its challenge areas, as well as success and failure areas based on the temporal dynamics of focus points and recurring issues within Commission communication documents. Johann-Christian Pielow and Britta Janina Lewendel (2011) adumbrates Art. 194 TFEU and in particular on the question whether the EU has gained supplementary competencies in the field of energy- or not. Additionally the further energy-related competencies given by TFEU as well as the Energy Charter Treaty will be discussed in order to evaluate the EU’s power to conclude energy supply related measures on a international level and concerning third countries.

Henryk Faas, Francesco Gracceva, Gianluca Fulli and Marcelo Masera (2011) presented the European Union’s approach towards energy security which is derived from several policy legislations and proposals that followed the European Commission’s 2000 Green Paper “Towards a European Strategy for the Security of Energy Supply”. However, Emmanuel Kakaras (2011) concluded that the European Union has a leading
position in resolving energy problems, having set strict targets and regulations as well as developed a number of initiatives to support and align the efforts of the Commission, member states and industry. Additionally, the EU Emissions Trading Scheme (EU ETS) is an important driving force for the realization of a low-carbon economy.

Jochen Hierl and Peter Palinkas (2009) ascertained that high fuel prices, the growing concern about global climate change and not least price disputes concerning natural gas supplies from Russia during the years 2005/06 and 2006/07 have highlighted energy policy in European capitals and European Union (EU) decision-making bodies in Brussels. Mehmet Baha Karan and Hasan Kazdagli (2011) analyzed the developments of European energy markets and regional markets in accordance to the market efficiency criteria and financial aspects of energy. Despite the physical, economic, and political barriers, the number of financial players participating in these markets is continuously increasing and a considerable success has been achieved for efficiency of the markets. Peter Palinkas (2005) noted that in order to improve the EU’s energy security and EU-Russian relations in the field of energy both partners initiated the "EU-Russia Energy Partnership”.

Remigiusz Rosicki (2012) enunciates the starting point for understanding the notion of the energy policy of the European Union is the supply chain security i.e. the traditional notion of energy security. Anna O’Connor (2010) measured how effectively the EU is balancing the issues of supply security and sustainability in their overall Energy Strategy. Global energy market and climate change situation also described in order to identify the EU’s position with regard to them and critical Geopolitics is used to analyze the issue of energy scarcity and the EU’s energy policy evolution. Brigid Gavin and Sangsoo Lee (2007) buttonholed the need for improving energy cooperation in Northeast Asia and to explore what lessons could be learned from European experiences. It analyses the concept of ‘energy security’ in the international context, the current energy situations of China, Japan, and South Korea, the evolution of energy cooperation in Europe and what lessons Northeast Asia might learn from Europe.
Anna Rulska (2006) discussed in detail the general principles governing energy security and leading the way to European dependence on energy. It also portrays the current energy situation in Europe, followed by issues associated with divergent energy needs of member-states, energy policy at present and its proposed changes has explained, followed by a stipulation on possible obstacles to implementation of such a policy. Gunther Oettinger (2010) demonstrated that coordination among EU Member States is required not only to create an internal energy market, but also for the external dimension of the EU’s energy policy. Liberalization of energy markets and mediation of the Ukraine–Russia gas crisis have shown that such coordination is indeed possible.

Peter Truscott (2009) keys out the core challenges Europe faces in securing long term energy supplies, the hurdles to overcome, and the mistakes to be avoided. To negotiate these realities, the EU must engage in coherent ‘energy diplomacy’ putting energy security, which is closely related to climate, food and water security, at the top of the foreign policy agenda. S. Yolcular (2009) reminded that hydrogen and fuel cell technologies could form an integral part of future sustainable energy systems. This will contribute to improving Europe’s energy security and air quality, while lessening climate change. The European Union prefers to use renewables, mainly hydrogen rather than fossil fuels, because of decreasing supply of fossil fuels and increasing demand for using renewable energy sources, especially hydrogen. K. Kaygusuz, O.O. Yuuksek and A. Sari (2007) elaborated the critical picture of the expenditures in research and development for RES in the EU-15 Member States. The European experience has shown that wind energy comprises today a reliable and cost-effective technology with positive effects on the reduction of CO$_2$ emissions.

Onno Kuik (2003) censoriously analyzed two long-term alternative climate change policy scenarios for Europe. In the first scenario, EU reduces carbon dioxide emissions by domestic measures; in the second scenario EU maximizes cooperation with the countries of the former Soviet Union (FSU). C. Roupas, A. Flamos and J. Psarras (2011) accounted a comparative analysis of oil and gas supply for the 27 European
Union member countries throughout the measurement of the vulnerability that their economies exhibit to oil and natural gas.

Jorgen Wettestad, Per Ove Eikeland and Mans Nilsson (2012) sketched the strategic reorientation towards electricity investment in the Swedish energy sectors, a ‘frontrunner case’ of Europeanization, and discusses how this change can be attributed to EU policy change, national policy change and organizational field developments respectively. Sanam S. Haghighi (2008) seeks to highlight the complications of this area of law within the EU and expand it to cover the energy sector in order to determine who and under what circumstances is responsible for guaranteeing security of energy supply for the consumers within the EU borders. Per Ove Eikeland (2011) analyzed the proposal of the September 2007 European Commission for a third internal energy policy package, aimed at removing the remaining barriers to free and fair competition and trade in the internal energy market.

EU-Russia energy relations are the hot topic of debate in industrial, political & academic arena and numerous findings are reported like Andrew Monaghan (2007); Keith C. Smith (2008); Pavel Baev (2008); Paul J. Saunders (2008); Svante E. Cornell and Niklas Nilsson (2008) and Sergey Seliverstov (2009). These reports render various dimensions of Russia-EU energy relations and dialogues. It covers the role of Gazprom and Energy Charter Treaty in their energy relations. It also discusses about supply and demand security, security of transactional routes etc. Katinka Barysch (2007) showed the enhancing position of Turkey in the European Energy Security activities.

Anke Schmidt Felzmann (2011) canvassed the member states choices to ensure domestic supply security by either increasing gas supplies from Russia or by reducing gas imports from Russia. It argues that the member states choices are informed by their assessment of the geopolitical reality and its expected impact on their national energy supply security. However, Florian Baumann and Georg Simmerl (2011) discussed several EU measures in the field of energy and analyzed the variety of the strategies that the EU member states apply in external energy policy. Starting from the finding that these national approaches are highly path-dependent regionally clustered, and therefore
in most cases traditionally conflicting, two solutions for enhancing the Common External Energy Policy are derived.

Diana Bozhilova (2009) presented an analysis of developments in EU energy policy given the ongoing realignment of strategic interest. It outlines the process of Europeanization, identifying caveats in the security of energy supply. It then proposes a solution to the main problematic of diversification of hydrocarbons supply through the fostering of regional co-operation amongst the states of South-East Europe. Debra Johnson (2005) examined the EU-Russian energy relationship from the perspective of both parties and considers the efficacy of competing policy paradigms in explaining this key link. Gawdat Bahgat (2009) pored on the growing energy cooperation between the EU and the three North African states-Algeria, Egypt and Libya.

Bartlomiej Nowak (2010) states there is a cohesive, EU-wide energy policy needed to ensure security of supply and reduce demand thereby reducing the dependence of Europe on foreign energy supplies. But the actual creation of such a policy must overcome a host of obstacles, including member states’ wish to protect their sovereignty, protectionism of national industries, and different approaches to Russia among member states. Bart Van Vooren (2011) explored the positive or negative impact of the new legal basis as well as the new external relations institutions has had on EU external energy policy. While Dominique Finon (2011) criticized the departure of the European Union (EU) from its traditional Soft Power vein in foreign energy policy, implying a strategy of gas corridors for import diversification in an intense political competition with Russia and analyzed intrinsic limitations of the EU initiative of promotion of Nabucco pipeline as a merchant line along three different economic perspectives.

Dieter Helm (2005) explicated the two interrelated aspects of energy in the context of European Union. It elucidates energy policies of the EU with special reference on securing supplies and measures on mitigating climate change. Deborah Murphy, John Drexhage, Aaron Cosbey and Dennis Tirpak (2008) imparted a detailed account of the significance of clean energy in the scenario of global climate change with emphasis
on renewable energy sources as a source of clean energy which contributes to decrease carbons emissions. Kazuhisa Koakutsu and Rie Watanabe (2006) dig into the linkages among energy security, developmental needs and climate change, and their implications for the post-2012 climate regime. After examining references to energy and development issues in the current climate regime, the relationships among climate change, development and energy security in an international and Asian context are discussed.

Jerzy Buzek (2010) sharpened the energy issues, specifically, the energy policy of Europe, which is connected with the obligation to combat climate change because this is quite a new obligation that was not an issue five or ten years ago. Thomas Spencer, Anna Korppoo, Kai-Olaf Lang and Kai-Olaf Lang (2011) assessed the issue of energy security and climate policy from the perspective of the Central and Eastern European Member States.

Miranda A. Schreurs, and Yves Tiberghien (2007) overviewed theoretical discussions on leadership, particularly as it pertains to the climate change arena. It also proposes a framework of multi-level mutual leadership reinforcement for explaining how and why the EU has been able to sustain leadership for over a decade’s time, culminating in the decisions to ratify the Kyoto Protocol and commit to a unilateral 20 percent reduction in CO₂ emissions relative to 1990 levels by 2020. It also explains the policies and programs that the EU and its members have adopted at the forefront of international efforts to address climate change especially at critical junctures. It concludes by looking to the future and whether the EU will be able to be a leader not only in agenda setting, but also in implementation of emissions cuts.

Jon Birger Skjaerseth and Jorgen Wettestad (2009 & 2010) provide a broad analysis of all the major phases in the development of the EU ETS based on multiple levels. It gives an analytical framework of EU Emissions Trading System. It also analyzed the initiation, decision-making and implementation of the EU ETS and it opens new avenues of debate with regard to Post-2012 Changes in the climate change regime.

William J. Nuttall (2009) reckon the European balance of opinion and experience of nuclear energy and notes that it has shifted significantly as the European Union has
grown from 15 member states to 27. The proportion of member states with nuclear energy experience has increased markedly. Also, as a result of changes affecting the main drivers of energy policy, the balance of policy enthusiasm in most EU-27 member states has shifted with time in favour of nuclear power. Javier de Cendra de Larragán (2012) commented about recent documents from the Commission suggesting that European Union policymakers increasingly view climate change as one among a number of pressing resource-exhaustion problems that demand decisive and urgent action.

Jonas Meckling (2011) analyzed the influence of competing business coalitions across three stages of the global diffusion of carbon trading: the internationalization of the policy instrument through the Kyoto Protocol; the U-turn of the EU from skeptic to frontrunner on emissions trading; and the attempts of the US to catch up with the global project of building carbon markets. Jorgen Wettestad, Per Ove Eikeland and Mans Nilsson (2012) noted that since 2009, the European Union has a new and more vigorous climate and energy policy, including a specific climate and energy policy package and a revised policy package aimed at completing the realization of the internal energy market. Sylvia Ostry (2006) traced the trade and environment issue as it evolved into sustainable development in the global trading system and provides a brief review of the Energy Charter Treaty.

**Objectives of the Study**

- To understand and analyze the significance of regional cooperation in the contemporary world.
- To examine the dimensions and theoretical foundations of European integration.
- To analyze the strategies and dimensions of EU energy policy.
- To review the EU response to climate change and energy transformation.
- To explore the theoretical linkages between regional cooperation and energy security in the EU.
Research Questions
This study is guided by the following research questions:

⇒ Does Regional Cooperation promote Energy Security?
⇒ Is there energy cooperation among EU member states and at the Union level?
⇒ What are the measures adopted by the EU to ensure energy security at the regional level?
⇒ How does the EU connect its climate change mitigation strategy with energy policy?
⇒ Does energy security promote cooperation with neighbouring states of the EU?

Hypotheses

⇒ Energy security is an important variable towards economic and social development.
⇒ There is a significant relationship between regional cooperation and energy security in the European Union.
⇒ The issue of climate change increased the importance of energy security at the global level.
⇒ As a successful regional forum, the EU has a unique capacity to help the world shift towards a more sustainable and secure energy path.
⇒ There is a positive relationship between regional energy cooperation and energy security in the EU.
⇒ EU energy policy and experience in regional energy cooperation provide positive lessons to other regions of the world.

Chapter Division

This study is divided into eight chapters. Chapter two is Regional Cooperation and Energy Security: A Conceptual Analysis. This chapter offers a conceptual analysis of two widely discussed terms, regional cooperation and energy security in international relations. Regional cooperation is not a novel feature of modern era; it existed even in
ancient times. But today, the distinction lies in the reality of coexistence of regional organizations and international organizations like the United Nations. The Second World War and its aftermath dismantled the old European order and crudely divided the world into two competing spheres where the new superpowers competed for influence. So the outgrowth of regionalism has been seen as a legitimate alternative to the reality of universalism to guarantee uninterrupted supply of essential raw materials for the economy of the powerful countries and also to secure integration of markets for industrial goods and services. The study of regional integration is often confounded with overlapping and cognate activities which usually address somewhat different problems. Specifically it is necessary to distinguish between regional integration and such competing terms as regionalism, regional cooperation, regional organization, regional movements, regional systems or regional subsystems of a global system. Regional cooperation will facilitate the countries to engage with each other to cooperate in the energy arena to provide energy security to the whole region.

Energy security has crossed the threshold to international scene amid the oil shocks of 1970s and ever since the oil shocks, there were plans of a reduced dependence on oil consumption and imports, particularly in major oil importing countries but this view has been put aside due to the increase in number of suppliers, proven reserves, transparency in prices and market liberalization. The concept of energy security is different from country to country and also from one period to another. From the viewpoint of a consumer and net importer of energy sources, energy security denotes the right to use reliable sources of energy at competitive prices produced in an environmentally sustainable and safe means. It also includes absence of physical disruptions and volatile increases in prices. On the other hand, energy security is in the perspective of a producer and net exporter of energy resources which signifies the security of supply as well as security of demand. Intensifying global energy use directs to greater interdependence between countries to achieve energy security which highlight the notion that energy is an ever more attractive constituent of geopolitical relations.
Chapter three is Evolution of the EU: A Theoretical Perspective. This chapter elucidates that the European Union has strengthened its status as the champion of regional integration in Europe over the past six decades which has moved towards to embrace all countries from the Baltic Sea to the southern shores of the Mediterranean and from the Atlantic to the western borders of Russia. The history of European Union can be divided into three epochs. First, the Luxembourg compromise period, that is, between 1958 and 1987. During this phase the Council was a futile collective institution with the system of national vetoes protecting the sovereignty of member states. On the other hand, legislative grid-lock in the Council facilitated Court activism and the freedom of the Court to interpret the Rome Treaty was thus the prime force impelling European integration all through the Luxembourg compromise.

The second episode of European integration began with the ratification of Single European Act (SEA) explicitly 1987 to 1992. At this time the Council became a successful legislative institution at the cost of national sovereignty of individual governments. The ratification of SEA effectively removed national vetoes in the Council which enabled the Commission to act as a leading force behind European integration. At the same time its legislative proposals respected the preferences of the crucial members of the Council under Qualified Majority Voting (QMV) and the Parliament under the cooperation procedure. The third and current era of European integration began with the Treaty of Maastricht in 1992. The Parliament is now a powerful legislator, coequal with the Council under the reformed co-decision procedure. In this present epoch all the four major institutions of the EU such as the Council, the Parliament, the Commission and the Courts occupy vital positions in the functioning of the European Union.

Neo-realism, Functionalism, Neo-functionalism, Intergovernmentalism, Liberal Intergovernmentalism, Transactionalism, Federalism, Constructivism and Multi-level Governance are the major theories of European integration. Each school of thought enlightens significant elements of the integration process as well as working together and they will more fully capture the range of institutional dynamics at work in contemporary Europe. Neofunctionalism has been regarded as the foremost integration
model of European integration. The process of spill over is the prominent feature most closely associated with the neofunctionalist approach to the study of European integration. In Haas’ formulation, spill over refers to a situation where ‘policies made in carrying out an initial task and grant of power can be made real only if the task itself is expanded’. Neo-functionalism explained the process of integration as a set of functional (i.e. economic) spill overs, leading to economic and political integration, with actors transferring their expectations, and loyalties to a supranational central authority. Neofunctionalism has been viewed as the most insightful and helpful reflexive theory that has been developed and refined over time in understanding European integration’s underlying dynamics. Thus, this study has used the theory of neofunctionalism for explaining the interconnection between regional cooperation and energy security in the European Union.

Chapter four is Energy security policies of the European Union: Internal Dimensions. It illustrates that an immense growth in the development of European energy policy has happened in the last few decades. The initiatives of European Commission with the support of European treaties have taken measures to advance the agenda of sustainability, competitiveness and security of supply in the energy sector. It is remarkable in the attainment of energy security in the European Union. The period during 1945-1957 energy was perceived as a major problem facing the six founding member states of the ECSC. Between 1957 and 1972 in which energy became an issue of lesser concern as oil supplemented as well as gradually replaced the dependence on indigenous coal. 1973-1985 marked the third era which incurred a dramatic review of the status quo following the Yom Kippur War, the ensuing oil embargo and the outbreak of warfare in the Middle East compounded the 1973-74 world stock market crush. These incidents resulted in an upsurge in oil prices and energy policy-making re-entered the EC agenda. The attempt of the European Commission to revitalize a common EU policy for energy from the late 1980s implies another stage in energy policy development. An immense growth in the development of European energy policy has happened in the first decade of the 21st century with the European Commission adopting successive
Green Papers and Strategic Energy Reviews to advance the agenda on sustainability, competitiveness and security of supply.

The Treaty on the Functioning of the European Union (TFEU) or the Lisbon Treaty of 2009 overtly acknowledged energy as a policy area for the first time since the ECSC and Euratom Treaties and offered a new legal basis for EU action in this field. It aims to ensure the functioning of the energy market and other single and competitive energy market issues. There is a large difference in the EU with regard to the energy mix and energy structure between member countries. Energy mix of the EU is dominated by fossil fuels in which oil continues to be a major source of energy and gas comes second in the energy mix. Security of energy supply has become an important priority of the energy policy from the very beginning of the European integration. The internal energy market will facilitate the EU to be a coherent negotiating block vis-à-vis third parties on energy issues. It would be an effective instrument to even out external supply-shocks by supplying energy according to the demand over the challenges of supply.

Chapter five is Energy Security in the EU: External Dimensions. This chapter depicts that in the present scenario energy is not only a strategic commodity but also a foreign policy apparatus. It dictates the pace of geopolitical change and is considered as the next major breakthrough of European integration in the present century. The EU’s external energy relations include specific energy dialogues with key suppliers, transit and consumer countries and developing bilateral or regional energy partnerships. These are intended to move towards the diversification of energy supplies, energy market integration and interconnections, sustainable energy use and the development of renewable and clean energy sources.

The European Commission’s programs for an External Energy Policy strengthens the EU through better coordination and by setting up the decisive mandate that gives the EU the possibility to negotiate on behalf of the 28 Member States. The EU is deepening its partnerships with key energy suppliers, transit countries, and consumer nations to guarantee secure, competitive, and sustainable energy at the time of import vulnerability, potential energy crises, and price as well as supply uncertainty. The EU’s
burgeoning external energy policy highlights energy interdependence that means a balance between the security of supply as well as the security of demand and proceeds through regular energy dialogues and bilateral as well as multilateral relations with key energy partners throughout the world.

Chapter six is Climate Change and Energy Transformation: The Policies of the EU. This chapter illustrates that global climate change is accelerated by the burning of fossil fuels which restrict the decision making freedom of future generations and immediate endeavours are required to tackle the backdrop of a growing international energy demand. The two principal human caused troubles associated with climate change operating at the global scale are: the energy-related emanations of heat trapping greenhouse gases with long atmospheric residence times and the depletion of stratospheric ozone as a result of discharges of chlorofluorocarbons and related compounds. In 2007 the European Council adopted ambitious energy and climate change objectives for 2020 to reduce greenhouse gas emissions by 20 percent, rising to 30 percent if the conditions are right, to increase the share of renewable energy to 20 percent, and to make a 20 percent improvement in energy efficiency which marked a turning point for the European Union’s climate and energy policy.

The programme of ‘Europe 2020 Strategy’ and the flagship initiative ‘Resource efficient Europe’ have incorporated EU energy and climate goals for smart, sustainable and inclusive growth. EU promotes the use of renewable energies and energy efficiency as one of its targets. The EU adopted the Climate and Energy Package in 2008 for putting the EU’s ambitious energy and climate policies into effect. The European Council approved the setting up of a regulatory framework for the geological storage of carbon dioxide. It is intended to make the deployment of carbon capture and storage technology in the EU. EU Emissions Trading System (EU ETS) is the cornerstone of the EU’s strategy for combating climate change. Now the European Union stands at the global leadership to tackle climate change, to face up the challenge of secure, sustainable and competitive energy, and to make the European economy a model for sustainable development in the 21st century.
Chapter seven is **Regional Integration and Energy Cooperation in the EU**. This chapter tells us that the European Union has made remarkable success over the years in the regional integration process by accommodating as many as 28 states into it. As we stand along with the opinion of Robert Schumann, the process of integration and formation of the new Europe takes place in a gradual manner. Energy cooperation is at the heart of European integration since the end of Second World War. The European Coal and Steel Community demonstrate that how old rivalries on the access to scarce energy resources could be transformed into peaceful economic cooperation. Six years later, the European Atomic Energy Community (EURATOM) and the European Economic Community (EEC) came into being in 1957. In this context neofunctionalism was devised as an attempt to report for the political regional integration process that emerged in its unique form in Western Europe in the 1950s. The theory was at its leading role until the mid-1960s because cooperation on coal and steel under the ECSC had spilled over into EEC and Euratom. After the early heroic period, the prominence of coal’s share in Europe’s fuel mix decreased and nuclear power became less palatable after the Three Mile Island incident and the Chernobyl catastrophe.

The oil crises of the 1970s and the consequent inflation as well as industrial restructuring made energy a dominant issue in the EU. The treaty reforms in the energy sector at the regional level, beginning with the Single European Act, virtually brought the entire scope of government functions previously performed at the national level as part of European policy making. The EU cooperation in the energy sector resulted in a unique energy market for Europe which put together half a billion consumers into a single internal energy market and interconnected all market players to the same rules on competition and security of supply. The fundamental base of EU energy law is making efforts to create and complete a single market for energy. The EU has been taking endeavours on building an integrated and competitive energy market from the early 1990s onwards due to its heavy dependence on oil and gas from external sources. In the context of energy cooperation, neofunctionalism can be summarised as foreseeing political actors in several distinct national settings persuade to shift their loyalties,
expectations and political activities towards a new political setting that takes place in a process whereby nations forgo the desire and ability to conduct foreign and key domestic policies independently of each other, seeking instead to make joint decisions or to delegate the decision-making to new central organs.

**Conclusion**

The post Second World War period has been remarkable with the proliferation of regional organizations of varied nature as well as scope and regional cooperation became a crucial element in the development process of the world politics. In the growth of regional cooperation both economic as well as political factors pushed a range of countries closer. The classical models as well as more recent theories of integration are in many ways significant for the regional integration processes of the present day world. Each of these theoretical approaches explains certain phenomenon or trends in the present international system and claims that it holds the key to regional or global integration.

Neofunctionalism is considered as one of the most important theories of European integration and its key theoretical concept, the spill over, is still imperative for all integration schemes. European Union has made remarkable success over the years in the regional integration process by accommodating as many as 28 states into it. Energy has always been an integral part of the European integration process and a common European energy policy has initiated as early as in the 1950s. Social, economic and political integration of the EU has seen as a spill over process of the energy cooperation because six countries came forward with the intention of establishing European Coal and Steel Community. European Union conducts a common internal and external energy policy in terms of energy security. The external dimension of energy policy has become an integral part of EU’s energy policy due to its growing dependence on imports, rising competition over energy supplies with emerging economies, volatile energy prices and the global challenges of climate change.

EU’s efforts in the energy sector reveal that the duty of ensuring energy security to the people is not only confined to national governments but also to regional and
international regime. Energy cooperation in the 21st century can be considered as the reincarnation of the first phase of the spill over process in the European integration. It is assumed that energy cooperation is the building block of the European integration in the present century. It has been clear that regional cooperation can contribute to energy security in any region of a continent. When we consider the fact of energy security, energy cooperation is one of the pivotal results of regional cooperation. Without regional cooperation the idea of energy cooperation is impossible or difficult because it is easy to form energy cooperation within the framework of a regional cooperation. Energy cooperation will effectively promote global energy security on the basis of transparent, stable and non-discriminatory global energy markets and diversified energy sources.

**Methodology**

This study is completed by using historical and analytical methods. The neofunctionalist theory of regional integration is applied to explain the interconnection between regional cooperation and energy security in the integration process of the European Union. A substantial amount of data is collected from official documents, books and articles collected from Mahatma Gandhi University Library, Library of the School of International Relations in M.G University, Jawaharlal Nehru University Library, New Delhi; IDSA Library, New Delhi; and Nehru Memorial Library, New Delhi. Inflibnet project of University Grants Commission is another source of data. Data collected from web resources is also used in this study.