Summary

While humankind struggles to avert the risks of climate change, it has become imperative that a dramatic reduction in carbon emissions must be achieved as quickly as possible. Scientific forecasts show that a significant part of this reduction is possible with energy transitions. Today, using energy transitions to increase the share of renewables in global energy supply stands as one of the key provisions of global environmental governance. Energy transition is not a new phenomenon. Various countries are currently experiencing shifts from hydrocarbon utilization to a wider use of renewable energy technologies. A substantial amount of literature exists regarding how this is happening in the West, and also in some developing countries. However, when it comes to energy transitions, the Arab Gulf region has not received the scholarly attention it deserves. One would assume this region to be one of the last places where such a paradigm shift could happen, due to the over-reliance of Arab Gulf states on hydrocarbons. However, this thesis finds evidence that Arab Gulf states are also experiencing energy transitions.

The primary goal of this thesis is to analyze the puzzling occurrence of an energy transition in a group of resource-rich, rentier countries. Based on this primary goal, the research question is constructed as “What is the scope of conditions, challenges, and opportunities of the current energy transition towards renewables which is taking place in a group of oil-rich rentier states of the Arab Gulf?”. This broad research question is made up of the following four sub-questions:

i) How are some oil-rich Gulf countries slowly beginning to embark on a post-fossil future, while others lag behind? What are the determinants of the development or under-deployment of renewable energy technologies in the Arab Gulf countries?

ii) What is the feasibility of adopting renewable energy support mechanisms in GCC states? What are the conditions for the successful application of feed-in tariffs and renewable energy auctions in the region?
iii) How and to what extent is the International Renewable Energy Agency (IRENA) addressing the energy challenges we are facing today?

iv) In the presence of weak input legitimacy, is it possible to have strong policy outputs in the environmental policymaking of Arab Gulf monarchies? What are the determinants of strong environmental policy outputs in these states?

To answer these questions, meta-analyses of the current literature, as well as comparative policy and case study analyses have been carried out. The empirical data for this thesis have been gathered through field research interviews at the IRENA and Masdar headquarters in Abu Dhabi.

Chapter 2 first assesses the current situation in renewable energy uptake in Arab Gulf states. Then it investigates whether there is a variation among them. Based on three different renewable energy installment indicators, it shows that the United Arab Emirates and Qatar are the leading countries in the region, while Saudi Arabia, Bahrain, Kuwait, and Oman are lagging behind. The chapter identifies three hypotheses which can explain this variation. These are: endogenous policy hypothesis, international regime hypothesis, and policy transfer hypothesis. The results show that there is no convincing evidence for the effectiveness of endogenous policy hypothesis and no significant variation is identified for the international regime hypothesis. However, two main channels of policy transfer are present in the leader countries. These are international research cooperation in the field of renewable energy, and international multi-sector business partnerships in the renewable energy sector. It is concluded that the key to increasing renewable energy uptake in the region is fostering these two channels of policy transfer.

Chapter 3 focuses on two outstanding renewable energy support mechanisms, feed-in tariffs and renewable energy auctions, and investigates whether they can also be introduced in the Arab Gulf region. To set up a framework of conditional requirements for their introduction, a meta-analysis of successful cases from various regions and countries is conducted. Different factors are found to affect the successful application of these two mechanisms separately. The investigation regarding the presence of the success
criteria in the Arab Gulf region shows that neither mechanism’s criteria were fully present in the region. Lack of public awareness and consent, large fossil fuel subsidies, and the absence of policy-specific institutions are impeding factors for feed-in tariff introduction. The findings show that the picture is brighter for auctions, as a result of ever-growing investments in research and development towards the creation of a local human resource potential.

Chapter 4 investigates how and to what extent International Renewable Energy Agency (IRENA) has been addressing the energy challenges we are facing today. Meta-analytical literature review focuses on the identification of institutional and non-institutional aspects of international energy governance. A detailed analysis of the institutional structure and functioning mechanisms of IRENA points out that the institution has substantial capacity to address institutional challenges, such as being as inclusive as possible. Non-institutional challenges are only partly tackled by IRENA. The centrality of conventional fossil resources in the international energy regime and the need for a normative change in global energy governance remain two non-institutional challenges which require further focus by IRENA and other international energy institutions.

Chapter 5 rests its analysis on the theoretical aspects of governance in Arab Gulf monarchies at large, delineating the impact of input legitimacy (governance indicators and factors that shape the policymaking process) on output legitimacy (effective policy outputs and progress). Evaluations of the World Bank’s World Governance Indicators, Freedom House’s Freedom Index, and Transparency International’s anti-corruption ranking show that there is a variation among the six Arab Gulf countries regarding these indicators and rankings. The assessment shows an overlap between indicators like political stability, government effectiveness, the rule of law, and control of corruption and renewable energy policy success. The two leader countries of the region, United Arab Emirates and Qatar, have the highest positions in these indicator rankings among the six Arab Gulf countries. Freedom House’s Freedom Ranking, however, showed a different variation. Kuwait has the best ranking among the six, followed by Qatar and United Arab
Emirates as the fourth country. The findings of Chapter 5 show that the hypothesis that a strong set of input-side indicators lead to policy success is not entirely supported in the case of the Arab Gulf monarchies. Analysis of the political-historical characteristics of the Arab Gulf states indicates that the role of elites is also a noteworthy factor regarding governance in traditional monarchies of the Arab Gulf. The main finding of this chapter is that even though better input legitimacy does lead to better policy results for a given environmental issue, for the Arab Gulf monarchies, “good governance by the elites” is also a contributing factor.

The conclusions of this thesis show that the ongoing energy transitions in Arab Gulf states face both challenges and opportunities. Policy transfer channels like international research cooperation and business partnerships in renewable energy, vast solar and wind potential, ongoing investments in research and development, proximity to IRENA and the ease of engagement with its activities stand as the main opportunities. Institutional incapacities, lack of public awareness and consent regarding renewable energy technologies, fossil fuel subsidies, and the need to strengthen democratic parameters are the main challenges that the region is facing during its energy transitions.