

Saving Energy by Shifting Clocks?

Energy Policy and the Introduction of Daylight Saving Time in East and West Germany

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In his essay *Energy and Equity* (1974), Ivan Illich gives an interesting contemporary starting point for interpreting the social role of energy in the last third of the 20th century. He describes the growing dependency of modern societies on their energy supply:

“High quanta of energy degrade social relations just as inevitably as they destroy the physical milieu. [...] The energy policies adopted during the current decade will determine the range and character of social relationships a society will be able to enjoy by the year 2000. A low-energy policy allows for a wide choice of lifestyles and cultures. If, on the other hand, a society opts for high energy consumption, its social relations must be dictated by technocracy and will be equally degrading whether labeled capitalist or socialist. [...] Even if nonpolluting power were feasible and abundant, the use of energy on a massive scale acts on society like a drug that is physically harmless but psychically enslaving.”¹

In uttering this opinion, Illich was a maverick. But until today most people would interpret the implementation of Daylight Saving Time (DST)² in

1 | Originally published as Ivan Illich: *Energy and Equity*. London: Calder, 1974. See download version: http://clevercycles.com/energy_and_equity, Accessed: 15.07.2011.

2 | This paper uses the American English expression *Daylight Saving Time* instead of the British English *Summertime*, although the latter is closer to the German *Sommerzeit*. Both terms imply misleading or biased connotations; *Daylight*

his spirit. Indeed, changing the clock twice a year has become one of the most widespread rituals of western industrial societies. Standard time is advanced in the summer months for one hour in order to increase the hours with daylight in the evening. In Germany, the scheme has been in constant use since 1980, when East and West Germany introduced it jointly. Looking at the history of daylight saving throughout the 20th century it could be easily described as a strategy of ‘social engineering,’ a scientific approach to achieve efficiency and coherence by arranging and channeling environmental and social forces.³ Hence, it is not only a far-reaching intrusion into everyday life, but also a bureaucratic sanction to redistribute power over energy according to specific interests.

But is the story really that simple? On closer inspection, it becomes obvious that there is a lack of clarity about why DST was introduced. It is a common misperception that this was first and foremost an energy saving measure. The corresponding Time Act (*Gesetz über die Zeitbestimmung*) does not speak of energy saving at all, but of “a better usage of daylight” and “adjustment of time measuring to neighboring states.”⁴ Public records and contemporary publications show that the West German government expected a marginal energy effect – less than 0.1 percent of total energy demand. In 1978, the conservative politician Werner Broll stated in parliament: “It is not a question of energy savings [...]. It is – to use a term from popular sociology – about improving the quality of life.”⁵

Saving Time, however, seems more accurate and definable. My thanks go to Ingo Köhler, Laura Rischbieter, Samantha Taber, and the participants and organizers of the Munich workshop for their help in improving the paper.

3 | Cf. John Alexander/Joachim K. H. Schmidt: “Social Engineering: Genealogy of a Concept”, in: Adam Podgórecki/Jon Alexander/Rob Shields, eds. *Social Engineering*. Ottawa: Carleton University Press, 1996, 1-19; Thomas Etzemüller: “Social engineering als Verhaltenslehre des kühlen Kopfes. Eine einleitende Skizze”, in: Thomas Etzemüller, ed. *Die Ordnung der Moderne. Social Engineering im 20. Jahrhundert*. Bielefeld: transcript, 2009, 11-40.

4 | “Gesetz über die Zeitbestimmung”, 25.07.1978, in: *Bundesgesetzblatt*, 31.07.1978, part I, 1110-11. All citations originally in German were translated by the author.

5 | Deutscher Bundestag: *Stenographische Berichte der Verhandlungen des Deutschen Bundestages*, Bonn 06.06.1978, 8015.

With this in mind, why is the idea of daylight saving time as energy saving time still so popular today? What role did energy play in the debates of the 1970s? And what does this tell us about the societal role of energy, especially in German society “after the boom”⁶, i.e. after the end of the ‘economic miracle’? How does it relate to Illich’s idea of human ‘energy addiction’? An analysis of political decision-making shows that the discussion was closely linked to the ‘German Question.’ The fear of a new time border through Germany and Berlin was responsible for a significant delay in implementing DST. While legislation for it had been prepared in Bonn as early as 1976, East Berlin’s reluctance led to a substantial delay. From an energy perspective, the dimension of Cold War politics might seem distracting. On the other hand, this provides a unique opportunity to compare two interlinked debates in two closely related societies and their different political systems.

To decode the social meaning and interpretation of DST and analyze its function within the energy discourse, this paper conducts four steps. First, it highlights the traditional link between DST and energy shortage, referring to experiences from before 1970. Second, it discusses the energy argumentation concerning DST in both East and West Germany. Third, it retraces the political decision-making process with a special focus on the interplay between East Berlin and Bonn. Fourth, it looks into the material and symbolic significance of DST in relation to energy and energy saving. This approach aims to take into account both historical and structural particularities of the case studies. While there are a few historic accounts of DST in the United States, literature on Germany and Europe is scarce.⁷ But records from the responsible public institutions as well as contemporary media reports provide substantial insight into the constellation of interests and argumentation.

6 | Anselm Doering-Manteuffel/Lutz Raphael: *Nach dem Boom. Perspektiven auf die Zeitgeschichte seit 1970*. Göttingen: Vandenhoeck & Ruprecht, 2008.

7 | Cf. David Prerau: *Seize the Daylight. The Curious and Contentious Story of Daylight Saving Time*. New York: Thunder’s Mouth Press, 2005; Michael Downing: *Spring Forward. The Annual Madness of Daylight Saving Time*. Berkeley, CA: Counterpoint, 2009; Ian R. Bartky: *One Time Fits All. The Campaigns for Global Uniformity*. Stanford, CA: Stanford University Press, 2007, 161-99; for Germany Dirk Schindelbeck: “Wem die Stunde schlägt”, in: *Damals. Das Magazin für Geschichte und Kultur* 32:4 (2000), 6-9.

THE HISTORY OF DST AS A HISTORY OF ENERGY SHORTAGES

It is little known that the German Empire introduced DST for the first time in 1916 – a world premiere provoked by World War I and its resource shortages. A few years earlier, the contractor William Willett had popularized the idea of shifting clocks in summer in the United Kingdom, but between 1909 and 1911 the parliament in London rejected several private bills to introduce DST.⁸ Then, starting on April 30, 1916, the German Federal Council (*Bundesrat*) decided to introduce DST, because of the “necessity of using heating and lighting materials economically”, and the UK followed its example three weeks later.⁹ Most other war participants followed suit, including the United States in 1918. German authorities later estimated annual savings of 250,000 tons of coal. Against the will of the new German government, the National Convention (*Nationalversammlung*) abolished the DST scheme in 1919, while Britain and France stayed on DST in the interwar years. Especially agrarian interest groups and shift workers opposed the new time rule, as it interfered with their daily routines.¹⁰ DST was reintroduced in April 1940, after the beginning of World War II. It remained in place during the winter months in 1940/41 and 1941/42. After the war, the occupying powers continued daylight saving, but directly after their founding, both German states stopped changing the clocks. For a long time DST was a marginal topic – apart from isolated petitions of individual

8 | William Willett: *The Waste of Daylight*. London: Author, 1907. Sometimes the concept is attributed to Benjamin Franklin, but he propagated a change of human behavior to make the best use of daylight, not changing clocks. Cf. Benjamin Franklin: “To the Authors of The Journal of Paris” (1784), in: Nathan G. Goodman, ed. *The Ingenious Dr. Franklin. Selected Scientific Letters*. Philadelphia: University of Pennsylvania Press, 1931, 17-22.

9 | “Staatssekretär des Innern to Staatssekretär des Reichs-Postamts”, Berlin 24.03.1916, in: Bundesarchiv (Federal Archive, BArch.), R 4701, no. 207. For other countries, cf. Prerau: *Seize the Daylight*, 84-94.

10 | “Reichsminister des Innern to Reichswirtschaftsrat”, Berlin 10.03.1926, in: BArch, R 401, no. 727; “Schreiben Reichsverkehrsminister to Reichsminister des Innern”, Berlin 27.11.1939, in: BArch, R 3101, no.10361.

to public expectations, and renewed attempts of other nations amplified historic experiences.

In October 1973, the Arab Petroleum Exporting Countries (OPEC) proclaimed an oil embargo in response to the Israeli Yom Kippur War. This led to an unprecedented rise in oil prices and caused Western countries to rethink their dependence on fossil fuels. In the United States, shifting clocks was an immediate reaction to these events. President Nixon asked Congress to pass emergency legislation to authorize DST on a year-round basis. Only six weeks after the oil embargo was launched, House and Senate passed the 'Emergency Daylight Saving Time Energy Conservation Act.' It provided for a two-year trial period starting January 6, 1974. But the public opposed year-round DST because of the dark winter mornings. Energy savings of 0.7 to 1.0 percent of the monthly demand failed to convince as an argument. The scheme was suspended from November 1974 to February 1975 and the United States returned to the old system.¹³ Then, in spring 1975, President Giscard d'Estaing announced that he planned to introduce DST in France the following year. In public as well as in consultations with its partners in the European Economic Community (EEC), France's main argument was energy saving. *Le Monde* explained to its readers: "c'est l'objectif de l'opération."¹⁴ The government expected savings of 300,000 tons of oil.

The German parliament likewise discussed DST in the context of the 'oil crisis'. In December 1973, Kurt Spitzmüller, a liberal member of parliament, started an inquiry into this question. The Federal Ministry of Economics agreed to examine the effects of DST, but the administration pre-estimated savings of only 0.1 to 0.2 percent of annual energy consumption.¹⁵ In the following months, further enquiries and government statements showed

13 | Cf. Prerau: *Seize the Daylight*, 190-192.

14 | "La nouvelle heure d'été", in: *Le Monde*, 09.03.1976, 42. Cf. "Memorandum über die Zweckmäßigkeit einer Koordinierung auf Europäischer Ebene zur Einführung eines Sommerzeitsystems", Bruxelles 21.04.1975, in: BArch, B 106, no. 104136.

15 | Deutscher Bundestag: *Stenographische Berichte der Verhandlungen des Deutschen Bundestages*, 13.12.1973, 4415. Cf. "Sparen mit der Sommerzeit", in: *Die Zeit*, 14.12.1973. For earlier statements cf. Bundesministerium des Innern to Petitionsausschuß des Bundestags, Bonn 16.09.1966, in: BArch, B 106, no. 104135.

that politicians did not see a compelling connection between DST and energy saving. The administration in Bonn had developed a doubtful rating of DST's energy effects in the previous decades that persisted throughout the 1970s. The East German leadership did not take up the initiative at all, even though the People's Republic of Poland followed the French example in 1977.¹⁶ So, if the Western and Eastern neighbors introduced DST out of energy considerations, why didn't East and West Germany do the same? Did energy policy not matter to them?

DAYLIGHT SAVING AND ENERGY POLICY

The oil price shock of 1973 was not the direct stimulus for implementing DST in either West or in East Germany. In the case of the GDR (German Democratic Republic), this attitude is not surprising, as the crisis did not affect the country at all. At the beginning of the 1970s, East Germany did not depend on oil the way West Germany did – oil covered 13 percent of primary energy demand in the East compared to 53.1 percent in the West. Instead, lignite accounted for 78.4 percent of East Germany's supply. Furthermore, the 'oil crisis' was not a price shock, as payments within the Comecon (Council for Mutual Economic Assistance) did not reflect the prices on the world market. The crude oil price for deliveries from the Soviet Union was agreed upon by contract for five-year periods. Starting in 1975, prices were based on the average world market price of the previous five years. As a result, rising prices reached the East German economy with a time lag. By the end of the 1970s, however, the relevance of oil imports had grown significantly. Hence, the Politbureau initiated a reorientation of energy policy in 1979, and the shift away from oil was accelerated after 1981. This led to a rise in the use of lignite from 63.4 percent in 1979 to over 70 percent throughout the 1980s.¹⁷

16 | The country had earlier experiences with DST in the years 1957 to 1964 (and as an occupied country in World War II). Cf. "Deutsche Botschaft to Auswärtiges Amt", Warsaw 06.12.1976, in: Politisches Archiv Auswärtiges Amt (PA AA), Zwischenarchiv, no. 109.340.

17 | Cf. Barbara Breuer: *Die Energiewirtschaft der Bundesrepublik Deutschland und der DDR im Vergleich*. München: Oldenbourg, 1987, 78; Harm G. Schröter, "Ölkrise und Reaktionen in der chemischen Industrie beider deutscher Staaten.

West Germany had conducted a comparable re-orientation of energy policy subsequent to the developments of 1973. The share of oil was reduced to 43.5 percent within ten years.¹⁸ At the same time, the Energy Security Act (*Energiesicherungsgesetz*) of November 1973 took immediate measures to reduce oil consumption. Even today the so called ‘car-free Sundays’ have a place in German collective memory, although their symbolic power vastly exceeded their actual energy effect.¹⁹ In the context of this policy, it is surprising that the idea of daylight saving did not persuade government officials. One compelling argument against ‘ad hoc action’ were traffic-related problems. Here, some attention had to be given to the coordination of European timetables, and according to experts this required a preparation period of at least twelve months.²⁰ However, the Ministry of Economics remained interested and, for further inquiry, obtained expert advice from Professor Helmut Schaefer of the ‘Research Center in Energy Economics’ (*Forschungsstelle für Energiewirtschaft*) in Munich. Schaefer submitted a first report in September 1974, before then publishing his results at various times with several revisions. According to his calculations, introducing DST from April to September could save about 5 percent of the annual demand for lighting electricity (1.7 terawatt hours). This was equivalent to 0.6 percent

Ein Beitrag zur Erklärung wirtschaftlicher Leistungsdifferenzen”, in: Johannes Bähr/Dietmar Petzina, eds. *Innovationsverhalten und Entscheidungsstrukturen. Vergleichende Studien zur wirtschaftlichen Entwicklung im geteilten Deutschland 1945-1990*. Berlin: Duncker & Humblot, 1996, 114; Friedrich-Ebert-Stiftung, ed.: *Die Energiepolitik der DDR. Mängelverwaltung zwischen Kernkraft und Braunkohle*, Bonn: Verlag Neue Gesellschaft, 1988, 26-27. It must be considered that payments were processed in so called transfer roubles.

18 | Cf. Breuer: *Energiewirtschaft*, 78. For the wider historical context, cf. Rainer Karlsch/Raymond G. Stokes: ‘Faktor Öl’. *Die Mineralölgewirtschaft in Deutschland 1859-1974*. München: Beck, 2003, 325-278; Rüdiger Graf, “Between National and Human Security: Energy Security in the United States and Western Europe in the 1970s”, in: *Historical Social Research* 35:4 (2010), 329-348.

19 | Cf. Jens Hohensee: “Und sonntags wieder laufen... Die erste ‚Ölkrise‘ 1973/74 und ihre Perzeption in der Bundesrepublik Deutschland”, in: Michael Salewski/Ilona Stölken-Fitschen, eds. *Moderne Zeiten. Technik und Zeitgeist im 19. und 20. Jahrhundert*. Stuttgart: Franz Steiner, 1994, 175-196.

20 | “Bundesverkehrsministerium to Bundesministerium des Innern”, Bonn 21.12.1973, in: BArch, B 106, BMI, no. 104135.

of total electricity demand and 0.08 percent of total energy demand. Schaefer described this as impossible to measure, however, as the effects of business fluctuations or annually changing weather conditions exceeded these projected savings. Additionally, Schaefer assumed increasing energy consumption in other sectors. First, this was the case with automobile traffic which was stimulated by daylight in the evening. Furthermore, DST increased the demand for heating: “The ‘low temperature point’ of the day is now part of the main heating time.”²¹ Hence, it was pointed out that DST had a reverse effect on oil consumption: “The savings of coal, water and nuclear energy are replaced by an increased consumption of oil products for road traffic and heating.”²²

The rapid downturn of political debates on DST in Germany indicates that Schaefer’s point of view was widely accepted. However, although the energy topic disappeared from ministerial papers, newspapers still presented this perspective in looking at the debates on a new Time Act. “DST should allow for a better use of daylight – thus making energy savings possible,” the *Süddeutsche Zeitung* simplified in 1978.²³ West German politicians now discussed a symbolic value of daylight saving. Parliamentarian Torsten Wolfgramm (FDP) argued in 1977 that “the psychological effect of time change will clearly be a notable momentum in regard to energy saving.”²⁴ Here, the collective practice of changing clocks was interpreted as a stimulus for public awareness. But experts like Schaefer opposed this strategy sharply: “This approach does a disservice to true efforts to use energy economically, which can only be achieved through appropriate information of each individual.”²⁵

21 | K. F. Ebersbach/H. Schaefer: “Sommerzeit und Energieeinsparung. Überraschendes Ergebnis einer detaillierteren Untersuchung: Es wird mehr Öl verbraucht”, in: *Energiewirtschaftliche Tagesfragen* 30 (1980), 497. As a summary “Note: Einführung der Sommerzeit”, Bonn 10.09.1975, in: BArch, B 106, BMI, no. 104136.

22 | Ebersbach: “Sommerzeit”, 498. Cf. Gerhard Bischoff/Werner Gocht: *Das Energiehandbuch*. 4th ed. Braunschweig: Vieweg, 1981, 350.

23 | Diethart Goos: “Bonn kann jetzt die Uhren vorstellen – tut es aber nicht”, in: *Die Welt*, 23.06.1978.

24 | Deutscher Bundestag: *Stenographische Berichte der Verhandlungen des Deutschen Bundestages*, Bonn 05.05.1977, 1750.

25 | Ebersbach: “Sommerzeit”, 498.

In East Berlin, the DST debate started with a considerable time lag. The presidency of the Council of Ministers established a working group in March 1977, but in the end, GDR experts came to results that were surprisingly similar to those of their West German counterparts. The Ministry for Coal and Energy calculated that annual savings would amount to 60 gigawatt hours – equivalent to 0.06 percent of the total energy demand of 1976. In 1980, energy savings were officially estimated at 100 gigawatt hours (the demand of 80,000 households) or 200,000 tons of lignite.²⁶ Additionally, energy experts saw positive effects of *not* introducing DST. International time differences were seen as advantageous, as this reduced the peak load of the East European electricity network system.²⁷ In conclusion, officials in East and West Germany shared a reserved or even negative judgment of DST's energy saving possibilities.

This is an obvious contradiction to the interpretation of DST as an energy saving measure; or at least it indicates that we must interpret decision-making processes in a wider context. Energy policy is not determined by simple, hard facts. Additional factors that frame the perception of energy saving must be taken into account. The obvious differences in political and social evaluation of DST mainly reflect the complexity of energy regimes and their cultural settings. Material differences as well as cultural (mis)interpretations of energy flows have to be reconsidered. In regard to the German debates of the 1970s, this leads to two specific questions: First, why did the German judgment differ from neighboring countries? Second, why didn't the experts' opinion determine the public perception of DST?

Here, the statements of the German experts involved can give important evidence. Their discussions often focused on differences in lifestyle. The Council of Ministers of the GDR explained the different approach of France and Poland with differences in everyday rhythms of life:

“The advantages in countries that advance standard time by an hour are a question of energy management. This is mainly connected with the fact that

26 | Cf. “Neumann to Stoph”, Berlin 09.03.1977, in: BArch, DC 20, no. 9438; “Draft: Ab 6. April: Sommerzeit in der DDR”, in: BArch, DC 9, no. 104; “17. Sitzung des Präsidiums des Ministerrates”, 10.03.1977, in: BArch, DC 20, no. 1/4/3743.

27 | Kulturbund der DDR, ed.: *Energiepolitik und Kulturfortschritt*. Berlin: Kulturbund der DDR, 1981, 21.

their lifestyles are different than in East Germany (starting work later, breaks from work at lunchtime and thus working later into the night, also an extensive entertainment industry that runs far beyond midnight).²⁸

The West German government similarly advanced the argument of differences in evening energy consumption in the case of Italy, stating that “the problem seems to be different because of the long midday rest.”²⁹ This figure of thought became commonly used. The *Spiegel* magazine highlighted differences in consumption patterns in relation to the United States arguing that “even more than in glittering America [...] the hopes of a crisis time-setting in the comparatively light-poor Federal Republic is illusory.”³⁰ In regard to intra-German differences, West German officials pointed to “East German citizens, whose everyday life, in general, starts earlier and ends earlier.”³¹ Along the same lines, West German specialists expected, “that more daylight in the evening will lead to an extension of ‘activity time’ and, therefore, a considerable reduction of sleep.”³² Experts did not come to a conclusion whether this led to an increase in energy consumption or not. But their considerations clearly emphasize that the implementation of DST was related to complex social and cultural processes that go far beyond energy saving.³³

28 | “Neumann to Stoph”, Berlin 09.03.1977, in: *BArch, DC 20, no. 9438*. In the case of Poland, it was said that this was visible in different daily load curves of electricity as “we [the GDR] deliver electricity to Poland in the evening and derive electricity from them for our peak demand in the morning.”, “Niederschrift über die am 21. März 1977 stattgefunden 2. Beratung über die Zweckmäßigkeit der Einführung der Sommerzeit in der DDR entsprechend dem Beschluß des PMR vom 10. März 1977”, in: *BArch, B 106, no. 104136*.

29 | “Kurzprotokoll über die Ressortbesprechung am 28. Mai 1975 im BMI”, Bonn 30.05.1975, in: *BArch, B 106, no. 104136*.

30 | “Leuchtet schön”, in: *Der Spiegel*, 04.02.1974, 53.

31 | “Aktennotiz des Arbeitsstab Deutschlandpolitik: Zeitgesetz”, Bonn 08.06.1978, in: *BArch, B 136, no. 18391*.

32 | Ebersbach: “Sommerzeit”, 497.

33 | For the cultural dimension of time, cf. Robert Levine: *A Geography of Time. The Temporal Misadventures of a Social Psychologist, or How Every Culture Keeps Time Just a Little Bit Differently*. New York: Basic Books, 1997; Hartmut

A second set of arguments evolved around the role of geographic preconditions. It is important to realize that the global system of standardized time zones established in the late 19th century has its counterpart in diverging times of sunrise and sunset from place to place. As the length of day in summer decreases on your way south, the positive effect of DST in France exceed the results in Germany where sunset (on average) is already later on standard time.³⁴ Additionally, not only latitude, but also longitude influences the results of DST. For instance, Poland is east, while Germany is west of the relevant time meridian 15° East (the meridian of Görlitz). As a result, the sun rises and sets earlier in Poland, thus increasing the daylight saving effect of changing clocks. Even without a detailed discussion or empirical data it is plausible that geographic factors as well as cultural differences had at least some effect on the outcome of DST. But most of the discussants did not acknowledge the different framework conditions. Many newspaper articles indicate that the perception of DST in other countries influenced debates in Germany. This is one reason why – as Schaefer pointed out – “every time [DST] was discussed, the main argument was energy saving for artificial lighting.”³⁵ The traditional public perception of DST as an emergency measure (as described earlier) probably served as a basis for this development.

Additionally, disputes over DST highlight both the technical importance and the social unawareness of energy’s multiple materialities. The widespread notion of ‘energy’ as a uniform entity – regardless of where it comes from and where it is going – often blurred the differences between energy resources and their transformation. On the side of energy input, the question of which energy source satisfied which kind of demand is crucial to understand diverging national priorities. In Germany, saving electricity for lighting could not significantly help to reduce oil consumption in the 1970s, but a higher oil input for electricity generation did substantiate the

Rosa: *Alienation and Acceleration. Towards a Critical Theory of Late-Modern Temporality*. Malmö: NSU Press, 2010.

34 | Cf. “Note: Sommerzeit”, Bonn 22.07.1975, in: BArch, B 106, no. 104136. The effect is observable in Germany as well. On August 1, for example, Hamburg has 43 minutes more daylight than Munich.

35 | Ebersbach: “Sommerzeit”, 496.

energy effect in France.³⁶ On the side of energy use, high expectations can be attributed to common misperceptions of energy demand for specific applications. In 1980, a newly added chapter on DST in the fourth edition of Gerhard Bischoff and Werner Gocht's *Handbook of Energy* pointed out that one kilowatt hour can either be used for illuminating a 60 watt light bulb for 17 hours or for showering with warm water for two minutes.³⁷ The example illustrated the fact that lighting has a comparably low energy consumption while DST could only save energy used for light, but not energy used for heat or power. Historically, this constraint led to a decrease in energy saving potential. In proportion to other uses, the expenditure for lighting diminished: In 1960, West German households used one quarter of their total electricity demand for lighting. In 1980, this share had decreased to 10 percent – even though absolute lighting energy use had doubled.³⁸ Additionally, increasing leisure time and leisure time facilities led to a situation where the social effects of DST overcompensated for its energy effects. Increased consumption of energy due to a higher standard of living, in general, reduces the (relative) potential of DST to save energy.

While the pitfalls of a highly aggregated concept of energy help to explain differences in the perception of saving potentials, the effects of cultural, social, and technical settings described before illuminate some national varieties. However, differences in numbers alone were not decisive for political decision-making. In the end, energy saving effects elsewhere neither substantially outranked Germany, nor were they extremely overrated or misjudged. Even French officials did not consider the calculated savings as outstanding. It is illuminating that they did not speak of (less impressive) percentages that could be saved, but of millions of tons of coal or oil (as did advocates of DST in Germany). Here, more general ideas about energy policy and government strategies come into play. A decisive difference between supporters and critics of DST was the appreciation of smaller achievements in energy saving – either in a material or a symbolic sense. In this spirit, the Bavarian Minister of Economy and

36 | In 1972, oil covered 67.3% of French, but only 55.2% of German energy demand. Cf. Hans R. Krämer: *Die Europäische Gemeinschaft und die Ölkrise*. Baden-Baden: Nomos, 1974, 56.

37 | Bischoff: *Energiehandbuch*, 350.

38 | Cf. Reinhard Schüssler: *Der Energieverbrauch der privaten Haushalte*, Frankfurt/Main: Lang, 1987.

Transport advocated DST in 1974, stating that “only the full exploitation of all possibilities in total” can lead to success.³⁹

Most West and East German officials, however, did not follow this kind of step-by-step rationality. In their minds a rather complex image of advantages and disadvantages of the new time scheme emerged. When clocks were advanced by one hour on April 6, 1980, the energy argument was part of the official statements, but by no means their core message. A West German government spokesman proclaimed: “DST permits a better use of daylight in the evening hours, so that even more outdoor activities are possible. It can also entail a certain degree of energy saving.”⁴⁰ In the newspaper *Neues Deutschland*, the East German leadership argued quite similarly:

“Citizens have better opportunities for recreation, sports, and other spare time activities in the summer evenings. To a certain degree, economic reserves can be mobilized. The longer use of daylight improves working conditions for the second shift, especially for outdoor work like construction and transportation. Also, savings of electricity, especially for lighting, are expected.”⁴¹

According to political players, this wide variety of motives led to the implementation of DST. Various aspects highlight the social embeddedness of energy rationality: the role of different geographical, technical and socioeconomic ideas and settings both within Germany and in regard of its neighbors. But the German example also illustrates the dependence of energy policy on wider political configurations and developments. Here, daylight saving became an arena for intra-German negotiations.

39 | “Jaumann to Friderichs”, München 25.06.1974, in: BArch, B 106, no. 104135.

40 | “Note: Einführung der Sommerzeit”, Bonn 04.02.1977, in: BArch, B 136, no. 18391.

41 | “Was bezweckt Sommerzeit?”, in: *Neues Deutschland*, 21/22.10.1979, 2.

THE SHARED POLITICAL HISTORY OF DST IN DIVIDED GERMANY

On April 28, 1978, the West German Chancellor, Helmut Schmidt, wrote a letter to Erich Honecker, General Secretary of the Central Committee of the Socialist Unity Party of Germany (SED) and Chairman of the Council of State of the GDR. Schmidt explained:

“It is of great importance for the Federal Government to learn the position of the German Democratic Republic regarding the question of introducing daylight saving time. [...] It is in the interest of good-neighborly cooperation within Europe to avoid time differences between the different states as far as possible.”⁴²

In a rather direct way, the West German government tried to persuade its counterpart in the East to introduce DST. But the answer from East Berlin, coordinated by Günter Mittag, Secretary of Economy at the Central Committee of the SED, was negative. It stated that the implementation was not planned as there were “no advantages, but instead disadvantages for various aspects of people’s work and lives.”⁴³ Party officials had re-evaluated the results of the working group of 1977, and they had come to the conclusion that there were no noteworthy economic advantages and that “the decision to implement DST can only be made from a political point of view.”⁴⁴ First of all, this meant that it was a matter of international coordination and not of energy policy. At the same time, this interpretation gave room for political maneuver and demarcation from West Germany.

This was especially the case since Schmidt and his social-liberal government were under severe political pressure. DST had become a matter of European integration, after France had opted for DST “in a then surprising decision”⁴⁵ and formally asked its EEC-partners to join the new

42 | “Helmut Schmidt to Erich Honecker”, Bonn 28.04.1978, in: BArch, DY 30, no. 3020.

43 | Cf. “Protokoll Nr. 20/78 zur Sitzung des Politbüros”, 23.05.1978, in: BArch, DY 30, no. J IV 2/2/ 1727.

44 | “Abteilung Grundstoffindustrie des ZK der SED to Günter Mittag”, Berlin (East) 12.05.1978, in: BArch, DY 30, no. 3020.

45 | “Sprechzettel für den Regierungssprecher”, Bonn 18.10.1979, in: BArch, B 106, no. 104138.

time regime. In 1977, seven of the nine members of the EEC used DST (with different start and end dates), with only Germany and neighboring Denmark opting out. In summer, West Germany had a new time border in the west, causing considerable difficulties, especially in transport. There was growing European pressure to introduce daylight saving, which led to the idea of writing directly to Honecker, even though the approach was controversial within the chancellery. The other cabinet members were only informed after the event. Only one of them, the Minister for Intra-German Relations, Egon Franke, learned of the wording of the correspondence.⁴⁶ Throughout the discussions within the administration his ministry had emerged as one of the most important opponents of DST and had emphatically stressed the intra-German implications of unilaterally introducing DST. In retrospect, Franke pointed out:

“For years, people have called for the introduction of DST. So far, however, we have no reason to believe that East Germany will do the same, meaning that the introduction of DST would bring an additional time border to Germany and Berlin. It would create many difficulties for intra-German traffic and – still more – for listening to and viewing West German radio and television programs. [...] Every decision on this question should be made in a way that does not diminish the commonalities within Germany, but – wherever possible – extends them.”⁴⁷

In June 1978, a coalition discussion arrived at the conclusion that DST should not be introduced for the time being as, “compared to the importance of the inner German aspects, economic and technical advantages are not that essential.”⁴⁸ Nevertheless, in the same month parliament approved a new Time Act, which included an authorization to implement DST by ordinance. But government officials had to announce that they would not use this authorization unless they achieved an agreement with East

46 | “Note: Sommerzeit”, Bonn 05.05.1978, in: BArch, B 106, no. 18391.

47 | Egon Franke: “Speech given at Kuratorium Unteilbares Deutschland”, 18.06.1979, in: Bundesministerium für Innerdeutsche Beziehungen, ed. *Texte zur Deutschland-Politik, series II, vol. 7*, Bonn: Deutscher Bundesverlag, 1981, 438-439. Cf. “Note: Probleme einer Zeitgrenze in Deutschland”, Bonn 22.02.1977, in: BArch, B 136, no. 18391.

48 | “Chef des Bundeskanzleramts to Arbeitsstab Deutschlandpolitik”, Bonn, 12.06.1978, in: BArch, B 136, no. 18391.

Berlin. The emotional appeal of the debate is exemplified by the fact that Herbert Wehner, then chairman of the SPD parliamentary group, had his disagreement with the Time Act officially recorded because of his fear of a potential time border.⁴⁹ This was the climax of a lengthy controversy. For a long time the Foreign Office had warned to not “inflate the affair as a false alternative – ‘European Integration vs. Intra-German Policy’ – but instead to address it as a practical task.”⁵⁰ Now it looked as if DST had reached a dead end. The ‘German Question’ clearly superseded all other related issues.

In order to correctly assess the impact of the ‘German Question’ it is important to follow up the course of negotiations chronologically. A mutual decision of Bonn and East Berlin to introduce DST had several times seemed a possibility. In 1976 and 1977, there was evidence that East Germany would also shift to DST after Poland had decided to do so.⁵¹ The Foreign Office – strongly supporting DST because of its possible “political psychological pro-Europe effect”⁵² – scrupulously recorded every relevant statement from representatives of the GDR. In May 1977, for example, Dr. Meißner, counselor of the East German Permanent Representation, said that – if all neighboring states introduced DST – “the GDR in [his] opinion will possibly decide similarly.”⁵³ By that time, the consultations of the East German working group had reached a positive outcome, despite its energy evaluations. It concluded that a “certain expediency of implementing DST”

49 | Cf. Deutscher Bundestag: *Stenographische Berichte der Verhandlungen des Deutschen Bundestages*, Bonn 22.06.1978, 8019.

50 | “Note from the Foreign Office: Zeitgesetz (Sommerzeit)”, Bonn 17.05.1977, in: BAArch, B 136, no. 18391.

51 | Cf. “Draft: Beschluss der Bundesregierung zur Frage der Sommerzeit in der Bundesrepublik Deutschland”, Bonn 02.03.1976, in: BAArch, B 106, no. 104137.

52 | “Bundesministerium für Jugend, Familie und Gesundheit to BMI”, Bonn 16.07.1975, in: BAArch, B 106, no. 104136. Cf. “Kurzprotokoll über die Besprechung am 12. Februar 1976 im BMI”, Bonn 19.02.1976, in: BAArch, B 106, no. 104137.

53 | “Note: Gespräch zwischen Zilch und Dr. Meißner”, Bonn 03.05.1977, in: PA AA, Zwischenarchiv, no. 122.339. Cf. “Note: Äußerungen der DDR zur Sommerzeit”, Bonn 16.06.1977, in: BAArch, B 136, no. 18391.

resulted from the “requirement of warranting undisturbed cross-border traffic of passengers and goods.”⁵⁴

Of course, West German officials did not know this. Instead, there were controversial political debates. In June 1977, Herbert Wehner personally made sure that the Time Act was removed from the parliamentary agenda at short notice. Two days before the scheduled vote, he had received a cable from the Confederation of German Trade Unions (DGB). It gave a warning “in the interest of health protection of a great part of the workforce not to introduce DST, especially because of the additional health risks for shift and night-shift workers.”⁵⁵ Although the unions redrew their protest soon afterwards, the delay of decision altered the course of action. In September, Meißner was more restrained: “For them [i.e. the GDR leadership] there are certain sociological and medical concerns. There is no economic benefit. But our [i.e. the West German] decision is important for the GDR.”⁵⁶ Finally, an ‘Ordinance on the determination of standard time in the GDR’ (*Verordnung über die Festlegung der Normalzeit in der DDR*) was released that did not mention DST.

One has to conclude that chances were good for a shared introduction of DST in the summer of 1977 – due to international interdependencies, not energy saving. Expert groups from both countries perceived the problem as multidimensional. As early as 1975, the West German Home Office observed: “Every decision pro and contra can be supported by good arguments. We should thus avoid an all too hasty decision.”⁵⁷ The East German Council of Ministers followed a similar, two-pronged strategy in 1977.⁵⁸ The delayed decision in West Germany, however, diminished the

54 | “Niederschrift über die 2. Beratung über die Zweckmäßigkeit der Einführung der Sommerzeit in der DDR entsprechend dem Beschluß des PMR vom 10. März 1977”, Berlin 21.03.1977, in: BArch, DC 20, no. 9438.

55 | “DGB to Herbert Wehner”, Düsseldorf 14.06.1977, in: BArch, B 136, no. 18391.

56 | “Note: Gespräch zwischen Zilch und Dr. Meißner”, Bonn 26.09.1977, in: BArch, B 136, no. 18391.

57 | “Note: Sommerzeit”, Bonn 06.05.1975, in: BArch, B 106, no. 104136.

58 | As a matter of fact, the working group elaborated lines of argument for both outcomes. “Niederschrift über die 3. Beratung über die Zweckmäßigkeit der Einführung der Sommerzeit in der DDR entsprechend dem Beschluß des PMR vom 10. März 1977”, 28.03.1977, in: BArch, DC 20, no. 9579.

arguments of international coordination and led to a repositioning of the GDR leadership. For two years there was no significant progress on the intra-German agenda. But on October 11, 1979, the Council of Ministers of the GDR decided to implement DST in the following year. East Berlin informed the Federal Chancellery by phone on October 15. The West German cabinet debated the question two days later and finally, on October 24, decided for DST.

Because of the limited sources it is difficult to judge the decision-making process in the Politbureau. The move was interpreted as a sign of détente in the West German press. The official records do not reflect the notion that DST was exploited for political reasons of demarcation or appeasement.⁵⁹ If we want to understand energy policy, however, it is not necessarily crucial to define beyond doubt the role of hard politics. Instead it is more illuminating to see how fears and pure assumptions interfered with decision-making. From today's perspective, it seems convincing to explain the East German changes in attitude both in 1977 and 1979 in regard to energy policy. In the fall of 1979, East Germany made a decisive turn in energy policy in order to "enforce a deliberate, high discipline in the use of energy everywhere and stop any waste of energy in the interest of society in general."⁶⁰ Additionally, the international constellation had changed once more after Czechoslovakia had introduced DST in 1979. Thus, actual advantages and disadvantages of DST determined the position of the GDR. One case in point is the fact that – unlike in West Germany – the topic was clearly discussed from an energy perspective in the administration and party apparatus: Lead-agencies were the Ministry for Coal and Energy and the Division for Primary Industry of the Central Committee of the SED. In West Germany, the Home Office was the lead-agency. The different

59 | The point can only be found in the mirror-inverted argument that the decision-making of the EEC was "like extortion". "Niederschrift über die am 21. März 1977 stattgefundene 2. Beratung über die Zweckmäßigkeit der Einführung der Sommerzeit in der DDR entsprechend dem Beschluß des PMR vom 10. März 1977", in: BArch, B 106, 104136.

60 | Cf. "Beschluß des Ministerrates der DDR über rationellen und sparsamen Einsatz von Elektroenergie, Wärme sowie Brenn- und Treibstoffen", in: *Neues Deutschland*, 21.09.1979.

perspective is apparent in the title of the files from the chancellery, which was ‘Summertime in Europe in relation to the Berlin traffic.’⁶¹

There is another ‘surprise twist’ in the intra-German story. On October 8, 1980, the East German leadership declared that it did not plan to use DST in 1981, “because the experiences of this year show that there are no advantages connected with it.”⁶² West German newspapers spoke of an “intra-German ice age.”⁶³ Only two months later, the GDR revoked its decision. The Soviet Union had decided to implement DST, and changing clocks became a question of “coordination with the socialist countries.”⁶⁴ Again, it is too easy to label East German politics as a power game. From an energy perspective abolishing DST was a rational decision; or as the newspaper *Neues Deutschland* put it: “Based on scientific expertise, that is available to the government of the GDR, and the experiences of the year 1980 [...] it is not advisable to repeat the experiment with DST next year.”⁶⁵

It is not a coincidence that international dependencies were decisive in keeping DST in East Germany, as they were for its introduction in West Germany. In both countries the decision-making process was superseded by political interests of international integration. In the long run, not energy politics, but power politics or, to be more precise, the anticipation of power politics determined the outcome of the debates. Of course, divided Germany during the Cold War era is a rather special case, but this is not an argument for ignoring the historical interweaving of energy issues and politics. Even more telling, interdependencies between the transnational political setting and economic and technical considerations worked out

61 | “Sommerzeit in Europa im Zusammenhang mit dem Berlinverkehr”, 1975-78, in: BArch, B 136, no. 18391.

62 | “Protokoll Nr. 40/80 zur Sitzung des Politbüros”, 08.10.1980, in: BArch, DY 30, no. J IV 2/2/1860.

63 | Joachim Nawroth: “Rückgriff auf Ulbrichts Rezepte”, in: *Die Zeit*, 11.11.1980.

64 | “Protokoll Nr. 49/80 der Sitzung des Politbüros”, 02.12.1980, in: BArch, DY 30, no. J IV 2/2/1869.

65 | “Keine Sommerzeit für 1981”, in: *Neues Deutschland*, 28.10.1980. A similar interpretation is given by the *Spiegel* magazine: “The decision of the GDR against DST, viewed as a new act of demarcation in the West, mainly has economic reasons.”, “Verlorene Zeit”, in: *Der Spiegel*, 03.11.1980, 40.

differently in East and West in regard to energy saving. In a large part this can be attributed to different societal debates on energy policy.

THE SOCIAL ROLE OF ENERGY CONSERVATION

Questioning a well-established time regime must be interpreted as a sign of deep-rooted uncertainty in a society. Throughout the German debates one point seems certain: If the energy effect had been larger, this would have decided it for DST. In 1974, the West German Home Office made clear: “In answering this core question it will be possible to draw the necessary conclusions for the introduction of DST. Other aspects cannot be [...] of any relevance for the decision, if the question of energy is answered in a way that makes the introduction of DST compelling.”⁶⁶ This readiness to change clocks for energy considerations, therefore, indicates the immense importance that was given to energy supply.

In West Germany the social importance of energy saving is central to explaining why the implementation of DST did not encounter more serious resistance: Perceived as an energy saving measure, DST fits perfectly within the guiding political principles of the 1970s as a decade of crisis. Additionally, it corresponded to the mixture of insecurity and search for alternative orientation in society. The oil price shock of 1973 – revitalized in the rising oil prices of the late 1970s – led to a new energy policy. The economy of the early Federal Republic had been subject to a “primacy of the cheapest energy supply possible.”⁶⁷ Now, more weight was given to energy security and a diversification of supply. Before, cheap energy not only contributed considerably to an impressive economic growth and a rising living standard; it also symbolized this development. In his book on the ‘oil price shock’,

66 | “Haushaltsreferat to Referat VI6”, Bonn, 26.07.1974, in: BAArch, B 106, no. 104135.

67 | Martin Czakainski: “Energiepolitik in der Bundesrepublik 1960 bis 1980 im Kontext der außenwirtschaftlichen und außenpolitischen Verflechtungen”, in: Jens Hohensee/Michael Salewski, eds. *Energie – Politik – Geschichte. Nationale und internationale Energiepolitik seit 1945*. Stuttgart: Franz Steiner, 1993, 17. Cf. Hans Michaelis: “Die Energiewirtschaft der Bundesrepublik Deutschland von 1970 bis 1990”, in: Hohensee/Salewski, eds. *Energie – Politik – Geschichte*, 51-74.

Jens Hohensee speaks of a “change in attitude in society.”⁶⁸ In general, the crisis is seen as the starting point for debates on energy saving in West German society. The practical results were considerable. Due to government provisions specific industrial energy consumption was reduced by almost 25 percent between 1973 and 1986, when heating one square meter of housing space required 20 liters of fuel oil instead of 29 liters.⁶⁹

Judging the scope of these savings must remain controversial. Hohensee states that “this process of reflection and the change in attitude was not persistent.”⁷⁰ It might at least be said that the focus shifted from ‘energy saving’ to ‘energy efficiency’. The reinterpretation of energy consumption was difficult because, in essence, it questioned the idea of progress. In the 1970s, the political discussions on energy still advanced the assumption of a tight connection of economic growth and increases in demand for primary energy. Although the idea of ‘decoupling’ was discussed – with some controversy – the political focus was on new energy options, mainly nuclear fission.⁷¹ The Energy Security Act (1973), the Energy Saving Act (1975), and the regularly updated Energy Program of the Federal Government gave political stimulus for raising energy efficiency. But at the same time even proponents of energy saving avoided an equation between energy saving and austerity: “This perception does more harm than good; [...] the aim to use energy efficiently and therefore economically is much more comprehensive and does not focus on a sacrifice of comfort.”⁷² Under these circumstances

68 | Jens Hohensee: *Der erste Ölpreisschock 1973/74. Die politischen und gesellschaftlichen Auswirkungen der arabischen Erdölpolitik auf die Bundesrepublik Deutschland und Westeuropa*. Stuttgart: Franz Steiner, 1996, 236-238.

69 | Cf. Bundesminister für Wirtschaft, ed. *Energiebericht der Bundesregierung vom 24.09.1986*, Bonn: Bundesregierung, 1986, 31.

70 | Hohensee: “Und sonntags wieder laufen...”, 193.

71 | Cf. Werner Müller/Bernd Stoy: *Entkopplung. Wirtschaftswachstum ohne mehr Energie?* Stuttgart: Deutsche Verlags-Anstalt, 1978; Klaus Traube/Otto Ullrich: *Billiger Atomstrom? Wie die Interessen der Elektrizitätswirtschaft die Energiepolitik bestimmen*. Reinbek: Rowohlt, 1982; Alfred Geißler/Botho Riegert: *Energiepolitik für eine lebenswerte Zukunft. Kohle contra Super-GAU*. Bonn: Verlag Neue Gesellschaft, 1988.

72 | Geißler: *Energiepolitik*, 63. Cf. Deutscher Bundestag, ed. *Energiepolitik im Deutschen Bundestag (7. und 8. Wahlperiode)*. Bonn: Deutscher Bundestag, 1980.

it seems obvious that saving without sacrifice would have been the charm of DST from an energy perspective. The linkage between energy saving and DST, therefore, is not only evidence of the deep roots of energy saving in society, but also of its limits. Or, as Klaus Meyer-Abich wrote:

“The broad consensus that energy saving is a good thing is problematic in the sense that it partially involves an interest in setting the principle so high that everybody involved is allowed to easily slip through. The truly interesting question is not whether we are in favor of saving energy, like we are in favor of family and against war, but instead where, when, how, how much energy can be saved, and by whom?”⁷³

Saving energy legitimized DST. At the same time, DST created acceptance for energy saving as it allowed everybody to contribute without changing individual consumption patterns.

In East Germany, DST was part of a technocratic approach to the problem. A similar change in attitudes like the one in West Germany could only have occurred with delay and only gradually. The ‘oil crisis’ was interpreted as a crisis of the capitalistic system. Until the mid-1970s high energy input was viewed as “proof of the economic power of true socialism.”⁷⁴ East Germany long took pride in numbers showing that total electricity production exceeded that of France or West Germany. In retrospect, Otto Reinhold, president of the Academy of Social Sciences of the Central Council of the SED, pointed out:

“In the past, the prevailing opinion was that more production, more national income could only be achieved through more material, more energy, and more investment. By now, we have realized that economic growth is only possible if existing resources are used more efficiently.”⁷⁵

73 | Klaus M. Meyer-Abich, ed. *Energieeinsparung als neue Energiequelle. Wirtschaftspolitische Möglichkeiten und alternative Technologien*. München: Hanser, 1979, 27.

74 | Friedrich-Ebert-Stiftung, *Energiepolitik*, 7. Cf. Institut für Internationale Wirtschaft und Politik, ed. *Energie- und Rohstoffprobleme im heutigen Kapitalismus*, Berlin (East): Institut für Internationale Wirtschaft und Politik, 1978.

75 | Otto Reinhold: “Über die wachsende Dynamik unserer wirtschaftlichen und gesellschaftlichen Entwicklung”, in: *Gesellschaftswissenschaftliche Kon-*

The policy shift bears a resemblance to West German debates. Energy prices for industrial usage rose significantly after 1976. September 1979 became a turning point in energy policy, when state holding companies were subjected to strict maximum demands for energy. In 1981, after the Soviet Union reduced its export quantities, these measures were tightened; energy policy now resembled “pulling the emergency break.”⁷⁶ The officially mandated energy-saving measures were more comprehensive and somehow more fundamental compared to those in West Germany. In the following years, the East German economy was able to disconnect growth and energy demand. But in the long run, the efforts were of little effect. Per-capita consumption of primary energy exceeded West Germany by 25 percent in 1987, which indicated a low degree of energy efficiency – especially since the GNP per capita was approximately one quarter lower.⁷⁷

The political system of the GDR cut off the emergence of an energy debate comparable to that in West Germany. Energy saving was ordered from above and governed by technocrats. To some extent, the limited results emerged from a lack of willingness to directly cut back private energy consumption. The government had kept the price for a kilowatt hour of electricity constant at 8 Pfennig since 1946. Energy experts were aware of the fact that “state-subsidized prices for energy [...] were no material stimulus for an economical use of energy in households.”⁷⁸ But they were kept as a matter of ideology and social policy. Attempts to mobilize citizens for energy saving remained limited despite of corresponding media campaigns. Emphasis was given to industrial productivity and official

ferenz des ZK der SED, ed. *Gesetzmäßigkeiten unserer Epoche – Triebkräfte und Werte des Sozialismus*. Berlin (East): Dietz, 1984, 158. Cf. Hans J. Hildebrand: *Wirtschaftliche Energieversorgung*. 3rd ed. Leipzig: Deutscher Verlag für Grundstoffindustrie, 1975, 78-79.

76 | Schröter: “Ölkrise”, 121. Cf. Willi Riesner: *Rationelle Energieanwendung*. 2nd ed. Leipzig: Deutscher Verlag für Grundstoffindustrie, 1982, 3.

77 | According to the information available, between 1979 and 1983 GNP rose 4.1%, while energy consumption decreased by 0.7%. Cf. Wolfgang Stinglwagner: *Die Energiewirtschaft der DDR unter Berücksichtigung internationaler Effizienzvergleiche*. Bonn: Gesamtdeutsches Institut, 1985, 17; Breuer: *Energiewirtschaft*, 111.

78 | Kulturbund der DDR: *Energiepolitik*, 12-13.

ordinances. As a consequence, although energy saving was a public issue, debates did not reflect the full complexity of energy demand.⁷⁹

Under the given circumstances, a symbolic dimension of DST as energy saving time – complementing or substituting energy savings – could hardly emerge. Debates on DST mainly mirrored prevailing ideas of social and economic management and its implementation. East and West Germans shared the idea of energy as basis for economic growth and symbol of living standard – until this image was shattered in the 1970s. On the one hand, different sources of energy and the resulting differences in the course of crisis help to explain the different approaches in divided Germany. On the other hand, political ideologies and strategies as well as basic societal mechanisms contributed to diverging dynamics and meanings of energy policy. Once more, this demonstrates that DST cannot be examined as an isolated phenomenon. Instead, the starting point of any historical analysis must include its social context.

CONCLUSIONS

Energy was the starting point of debates on DST in Germany in the 1970s. Shifting clocks emerged as a measure of ‘social engineering’ recalling experiences from two world wars. However, there is no distinct and one-dimensional connection between energy saving and daylight saving. First of all, historical debates show that at least two dimensions of relations must be distinguished. On the one hand, measurable energy savings and, on the other, an emblematic stimulus of energy saving. The complexity of the issue made DST part of political decision-making processes as well as conflicting energy discourses. Thus, it became subject to historical change and structural conditions. It is by chance that DST was introduced directly after the so called ‘second oil crisis’ of 1979. Introducing it in Germany was not an energy emergency measure. In East Germany, officials judged

79 | Matthias Vogel: *Energiewirtschaftliche Handlungszwänge in der DDR. Zu Möglichkeiten einer marktwirtschaftlichen Energieversorgung auf dem Territorium der DDR aus der Sicht internationaler Entwicklungstendenzen unter der Bedingung des Zusammenwachsens beider deutscher Staaten in den 90er Jahren*. Berlin (East): Institut für Internationale Politik und Wirtschaft, 1990, 15. Cf. Riesner: *Rationelle Energieanwendung*, 48.

DST as unsuitable despite its appeal as a planned economy of daylight. As a matter of fact, it seems as if the administrative view of energy was too technocratic to realize its potential as a tool of social engineering. In West Germany, after 1975 the political debate went beyond energy saving. Marginal savings were included into the argument to use a symbolic effect as a moment of energy saving. Its significance is part of the “high position that is assigned to energy saving today”, as energy expert Schaefer put it.⁸⁰ Here, DST can be interpreted as part of a process of social re-organization along the line of ‘greening everyday life’.

If questioning time order is a sign of uncertainty, producing new securities must be seen as a complex process. Certainly, the process did not work out as a planning from above aiming at modernization and rationalization. In this sense, Illich’s concept of ‘energy addiction’ is an oversimplification. The multiple ways daylight saving was connected to energy issues illustrate a tendency to ‘energize’ social debates. But DST is also closely connected to other key issues of the 1970s and 80s like ‘individualization’, ‘leisure society’, and ‘quality of life’. Even if the aspect of energy saving is part of the public image of DST, it is important to see the limitations of such an approach. Everyday life soon gave way to a different incorporation of DST which was not anticipated in most of the governmental and parliamentary debates. Starting in 1980, people in East and West Germany developed a shared interest in the recreational value of daylight saving. “Most citizens have discovered that more daylight means that they can make a little more of their lives. Tennis fans and hobby gardeners appreciate the gift of an hour just like do-it-yourselfers, clandestine workers and fans of outdoor bars,” wrote the *Spiegel* magazine. “East Germans, for example, use the longer summer evenings for extra car rides to the countryside [...]”⁸¹ The transformation of a discourse of economic crises and energy shortage into a momentum for quality of life is remarkable. Would DST have been accepted in a similar way without the ‘side effects’ of leisure and recreation? Its flexibility makes DST not only a widely accepted tool for social re-orientation, but also a fruitful subject matter for historians who want to understand the practices of social stability.

80 | Ebersbach: “Sommerzeit”, 498.

81 | “Weniger hitzefrei”, in: *Der Spiegel*, 01.09.1980, 104; “Verlorene Zeit”, in: *Der Spiegel*, 11.11.1980, 42.

Daylight saving time as energy saving time is a myth. Not because its effects on energy consumption are questionable but rather because of the constructiveness of energy issues as a whole. In an impressive way the debates on daylight saving illustrate how societies discuss, constitute, and create energy problems. First, the legacy of DST as an emergency measure clearly calls for a historical contextualization. Its meaning and outcomes cannot be assessed timelessly. Second, the difficulties of judging its effect on energy consumption highlight the complexity of scientific and public concepts of energy and how this affects our views. Not only specific ways of using energy (as well as of using time) came into play, but geographic factors and energy infrastructure as well. Third, the decision-making process interfered with topics that – at first sight – bear no relation to energy policy. The political dimension of DST in divided Germany stresses this context-sensitive character. Energy issues were not simply instrumentalized for political reasons, both issues were durably interlinked. Forth, the overall picture of energy's social and cultural embeddedness has to include the dimension of social structures and mechanisms. The scope of action for DST was limited by the way energy saving discourses in East and West Germany related to their specific societal surroundings.

Combining these aspects, a historical perspective offers the possibility of understanding how energy policy and consumption are shaped by societal values, economic interests, and political choices (as by technology and available resources).⁸² It is not the job of an historian to judge the arguments for and against DST. It is more revealing why, when, and where they were uttered. Historians have to ask to what extent this constellation was open to historical change. The better we understand that it matters how we talk about energy, how we define its societal role, and how we conceptualize its materiality, the more we can judge and rate the scope and limitations of our contemporary decisions as consumers and citizens.

82 | Cf. Paul Sabin: “The Ultimate Environmental Dilemma”: Making a Place for Historians in the Climate Change and Energy Debates”, in: *Environmental History* 15:1 (2010), 76-93.

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