

# Daylight Saving Time

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## Summary

Daylight Saving Time (DST) is a period of the year between spring and fall when clocks in most parts of the United States are set one hour ahead of standard time. The time period for DST begins on the second Sunday in March and ends on the first Sunday in November. The beginning and ending dates are set in statute. Congressional interest in the potential benefits and costs of DST has resulted in changes to DST observance since it was first adopted in the United States in 1918.

The United States established standard time zones and DST through the Calder Act, also known as the Standard Time Act of 1918. The issue of consistency in time observance was further clarified by the Uniform Time Act of 1966. These laws as amended allow a state to exempt itself—or parts of the state that lie within a different time zone—from DST observance. These laws as amended also authorize the Department of Transportation (DOT) to regulate standard time zone boundaries and DST. The time period for DST was changed most recently in the Energy Policy Act of 2005 (P.L. 109-58).

Congress has required several agencies to study the effects of changes in DST observance. In 1974, DOT reported that the potential benefits to energy conservation, traffic safety, and reductions in violent crime were minimal. In 2008, the Department of Energy assessed the potential effects to national energy consumption of an extended DST, and found a reduction in total primary energy consumption of 0.02%. Other studies have examined potential health effects associated with the spring and fall transition to DST and found a cumulative effect of sleep loss and increased risk for incidence of acute myocardial infarction in specific subgroups.

Only Congress can change the length of the DST observance period; however, since 2015, at least 39 states have proposed legislation to change their observance of DST. These efforts include proposals to exempt a state from DST observance—which is allowable under existing law—and proposals that would effectively establish permanent DST—which would require Congress to amend the Uniform Time Act of 1966. Most of the proposals have not passed. Three states have enacted permanent DST legislation: Florida, Washington, and Tennessee.

Congress may consider whether to make additional changes to DST observance or standard time. Several bills have been introduced in the 116<sup>th</sup> Congress that would make changes to standard time to effectively implement year-round DST. On March 12, 2018, the House Committee on Energy and Commerce sent a letter to DOT requesting updated information related to DST and standard time. On June 20, 2018, DOT informed the committee that it had initiated a literature review of the issue and would share the results with the committee, but as of June 2019 this has not been submitted.

## Contents

Introduction .....	1
The Development of Standard Time and DST .....	1
The Calder Act or the Standard Time Act of 1918 .....	1
The Uniform Time Act of 1966 .....	2
Other Changes to Standard Time and DST .....	2
Temporary Year-Round DST .....	2
Adjustments to the Length of DST Observance .....	3
Other Changes .....	3
Potential Effects of DST .....	3
Safety .....	4
Energy Savings .....	5
Health .....	5
Department of Transportation's Regulatory Process .....	6
Selected State Actions to Change DST Observance .....	7
Potential Issues for Congress .....	10

## Tables

Table 1. States Introducing Daylight Saving Time Observance Legislation: 2015-2019 .....	8
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## Contacts

Author Contact Information .....	11
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## Introduction

Daylight Saving Time (DST) is a period of the year between spring and fall when clocks in most parts of the United States are set one hour ahead of standard time. The beginning and ending dates and times—the second Sunday in March at two o'clock ante meridian and the first Sunday in November at two o'clock ante meridian—are set in statute.<sup>1</sup> Congressional interest in the potential benefits and costs of DST has resulted in changes to DST observance since it was first adopted in the United States.

Congress may consider whether to make additional changes to DST observance or standard time. Congress may also consider whether additional examination of potential benefits and costs of DST observance would be informative. This report presents a selected history of DST in the United States and includes a summary of potential effects, selected state actions related to DST or standard time, and federal legislation that has been introduced related to DST in the 115<sup>th</sup> and 116<sup>th</sup> Congresses.

## The Development of Standard Time and DST

The development of railroads led to the creation of a standard time in the United States. To reduce the confusion resulting from locally established “sun times” at railroad terminals, U.S. and Canadian railroads adopted four standard time zones in 1883.<sup>2</sup> The four established time zones were the Eastern, Central, Mountain, and Pacific. Adoption of time zones at the local level was influenced by the time zones adopted by the railroads.

## The Calder Act or the Standard Time Act of 1918

In 1918, Congress passed an act to provide standard time for the United States (also known as the Calder Act and the Standard Time Act of 1918).<sup>3</sup> The act established five standard time zones; the fifth time zone was established to include Alaska. It authorized the Interstate Commerce Commission (ICC) to fix the time zone boundaries within the United States and to change them as necessary. The act also set a summer DST to begin on the last Sunday of March and conclude on the last Sunday in October. The adoption of DST in the United States was preceded by adoption of DST in Europe during World War I.<sup>4</sup> After World War I, Congress abolished summer DST at the federal level, although it remained a local option with some states continuing to observe it.

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<sup>1</sup> See 15 U.S.C. §260a. Effectively, this means that in the United States, each time zone switches to and from DST at a different time. This is in contrast to the European Union, where all time zones change at the same moment.

<sup>2</sup> “Sun times” refer to the apparent solar times established at locations based upon the apparent motion of the Sun (i.e., noon would be the time of day when it appears that the Sun has reached its highest point in the sky). Department of Transportation (DOT), *Uniform Time*, February 13, 2015, <https://www.transportation.gov/regulations/time-act>.

<sup>3</sup> Act, March 19, 1918, ch. 24, 40 Stat. 450 (15 U.S.C. 261 et seq.).

<sup>4</sup> In an effort to conserve fuel, Germany began observing DST in 1916, and as the war progressed, the rest of Europe adopted DST as well.

## The Uniform Time Act of 1966

In 1961, the Interstate Commerce Commission (ICC) recommended that Congress reexamine “the entire field of standard time.”<sup>5</sup> According to the ICC, “the growing inconvenience, confusion, and sometimes danger, resulting from this time situation would seem too great a price to pay merely to preserve the right of local option in matters of standard time.”<sup>6</sup> The reexamination resulted in the Uniform Time Act of 1966 (P.L. 89-387).<sup>7</sup> The act mandated standard time within the established time zones and specified the observance period for DST: clocks would be advanced one hour beginning at 2:00 a.m. on the last Sunday in April and turned back one hour at 2:00 a.m. on the last Sunday in October. States were allowed to exempt themselves from DST as long as the entire state did so. If a state chose to observe DST, the time changes were required to begin and end on the established dates. The ICC was authorized with implementing the act until the authorities were transferred to the Department of Transportation (DOT), which occurred in October 1966 through the Department of Transportation Act (P.L. 89-670).<sup>8</sup>

In 1972, the Uniform Time Act was amended (P.L. 92-267) to allow states that were split between time zones<sup>9</sup> to exempt either the entire state or that part of the state lying within a different time zone. The following states and territories do not observe DST: American Samoa, most of Arizona, Guam, Hawaii, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands.<sup>10</sup>

## Other Changes to Standard Time and DST

### Temporary Year-Round DST

Year-round DST has been implemented twice on a temporary basis in the United States. In 1942, Congress enacted a law to institute year-round DST, which became known as “War Time.”<sup>11</sup> The law advanced the standard time for each time zone by one hour to be in effect until six months after the war ended or earlier if Congress required in a subsequent concurrent resolution. War Time concluded on the last Sunday in September 1945.<sup>12</sup> During the 1973 oil embargo by the

<sup>5</sup> Interstate Commerce Commission (ICC), *75<sup>th</sup> Annual Report of the Interstate Commerce Commission: Fiscal Year Ended June 30, 1961*, H. Doc. 262, Washington, DC, 1961, p. 148; ICC, *Interstate Commerce Commission Activities: Supplement to the 75<sup>th</sup> Annual Report*, H.Doc. 369, Washington, DC, 1962, p. 229.

<sup>6</sup> ICC, *75<sup>th</sup> Annual Report of the Interstate Commerce Commission: Fiscal Year Ended June 30, 1961*, H.Doc. 262, Washington, DC, 1961, p. 146.

<sup>7</sup> Uniform Time Act of 1966 as amended, 15 U.S.C. §§260-267.

<sup>8</sup> DOT regulates standard time zone boundaries and DST per 49 C.F.R. §71.

<sup>9</sup> Fourteen states are divided between two time zones, ranging from those states almost evenly divided between two zones (Kentucky, South Dakota, Tennessee) to those with only a small area of the state in a second time zone (Kansas, Nevada, Oregon, Texas). The 14 states are: Florida, Indiana, Kentucky, Michigan, and Tennessee split between the Eastern and Central time zones; Kansas, Nebraska, North Dakota, South Dakota, and Texas split between the Central and Mountain time zones; Idaho, Nevada, and Oregon split between Mountain and Pacific time zones; and Alaska split between Alaskan and Hawaii-Aleutian time zones.

<sup>10</sup> Department of Transportation, *Daylight Saving Time*, March 10, 2014, <https://www.transportation.gov/regulations/daylight-saving-time>. According to Haw. Rev. Stat. Ann. §1-31, Hawaii exempted itself in 1967. According to Ariz. Rev. Stat. §1-242, Arizona exempted itself in 1968.

<sup>11</sup> According to the ICC, “War Time” was a strategy “to assist in dissipating evening peakloads, which were threatening to exceed the capacity of our limited power facilities available for nondefense purposes, and which were even greater in winter than in summer months.” ICC, *Interstate Commerce Commission Activities: Supplement to the 75<sup>th</sup> Annual Report*, H.Doc. 369, Washington, DC, 1962, p. 225.

<sup>12</sup> 56 Stat. 9, *An Act to Promote the National Security and Defense by Establishing Daylight Saving Time*, P.L. 77-403,

Organization of Arab Petroleum Exporting Countries (OAPEC), Congress enacted the Emergency Daylight Saving Time Energy Conservation Act of 1973 (P.L. 93-182), which established a trial period of year-round DST, from January 6, 1974, to April 27, 1975.<sup>13</sup> The act was amended in October 1974 by P.L. 93-434, which required a return to standard time for the period beginning October 27, 1974, and ending February 23, 1975, when DST resumed. When the trial period ended in 1975, the country returned to observing summer DST (with the aforementioned exceptions).

## Adjustments to the Length of DST Observance

Congress has made additional changes to the Uniform Time Act. In 1986, Congress enacted P.L. 99-359, which changed the beginning of DST to the first Sunday in April. In 2005, Congress enacted the Energy Policy Act of 2005 (P.L. 109-58). Section 110 of this act amended the Uniform Time Act, by further changing DST to begin the second Sunday in March and end the first Sunday in November; this DST period remains in effect today. The act required the Secretary of the Department of Energy (DOE) to report to Congress on the impact of extended DST on energy consumption in the United States (see section on “Energy Savings”).<sup>14</sup>

## Other Changes

Other legislative changes addressed time zones. P.L. 106-564 amended the Calder Act to increase from eight to nine the number of standard time zones in the territory of the United States, creating Chamorro standard time, which includes Guam and the Commonwealth of the Northern Mariana Islands.<sup>15</sup> It also amended the Uniform Time Act of 1966 to include Guam and the Northern Mariana Islands in the definition of “State.”<sup>16</sup> In 2007, the 110<sup>th</sup> Congress enacted the America COMPETES Act (P.L. 110-69). Section 3013 of this act made changes to the Uniform Time Act regarding Standard Time in the United States, including a change to Idaho’s time zone.<sup>17</sup>

## Potential Effects of DST

Support and opposition to changes in DST observance often focus on its potential effects. Those in favor of extending DST observance reportedly argue that the extended daylight in the evening promotes economic activity, including tourism.<sup>18</sup> Those against extending DST observance

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77<sup>th</sup> Congress, 2<sup>nd</sup> Session.

<sup>13</sup> The act also required DOT to examine the effects of the act including safety of children traveling to and from school and school hours.

<sup>14</sup> U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy, *Impact of Extended Daylight Saving Time on National Energy Consumption*, October 2008, at [http://www1.eere.energy.gov/ba/pba/pdfs/epact\\_sec\\_110\\_edst\\_report\\_to\\_congress\\_2008.pdf](http://www1.eere.energy.gov/ba/pba/pdfs/epact_sec_110_edst_report_to_congress_2008.pdf).

<sup>15</sup> According to 49 C.F.R. §71.1(c), “The time zones established by the Standard Time Zone Act, as amended by the Uniform Time Act of 1966, are Atlantic, eastern, central, mountain, Pacific, Alaska, Hawaii-Aleutian, Samoa, and Chamorro.”

<sup>16</sup> By including Guam and the Northern Mariana Islands in the definition of “State,” these territories may exempt themselves from DST as provided in the Uniform Time Act of 1966.

<sup>17</sup> CRS identified no DST-related legislation or legislation to amend the Uniform Time Act after enactment of P.L. 110-69 until the 115<sup>th</sup> Congress. CRS searched the Congress.gov database to identify DST-related legislation using a combination of keywords or phrases and proximity locators. Keywords and phrases included the following: daylight saving time; D.S.T.; permanent; Uniform Time Act of 1966; standard time; saving sunshine; and time zone(s).

<sup>18</sup> See, for example, Lance Shearer, “No ‘Fall Back’ Position? Florida Legislature Passes Full-Time Daylight Saving

reportedly argue that losing an hour of daylight in the morning could negatively affect golf course operations, ski resorts, and schoolchildren's morning commutes.<sup>19</sup> A number of studies have been conducted on DST's effects on safety, energy savings, and health. A selection of these—including studies mandated by Congress—is discussed in this section. This is not a comprehensive review of the literature.

Congress has required several agencies to evaluate the effects of DST. DOT provided an interim evaluation and final report on the operation and effects of DST in 1974 and 1975.<sup>20</sup> The interim report's findings were inconclusive, stating that the observed effects were “so small that they could not in general be reliably separated from effects of other changes occurring at the time.”<sup>21</sup> The report concluded that, “there is no unambiguous direct evidence that [the measurable effects of year-round daylight saving time] were either beneficial or harmful.”<sup>22</sup> DOT reported that “modest overall benefits might be realized by a shift from the historic six-month DST (May through October) [to year-round DST] in areas of energy conservation, overall traffic safety, and reduced violent crime.” DOT also reported that these potential benefits would be minimal and difficult to distinguish from seasonal variations and fluctuations in energy prices.

## Safety

After DOT submitted the report to Congress in 1975, Congress directed the National Bureau of Standards (NBS)<sup>23</sup> to conduct a technical evaluation of the DOT study and to deliver a report to Congress. In its report, NBS found no significant energy savings or differences in traffic fatalities.<sup>24</sup> Although statistically significant evidence was found of increased fatalities among school-age children in the mornings during the four-month period January–April 1974 as compared with the same period (non-DST) of 1973, NBS stated that

This increase cannot be simply interpreted as ‘DST effect,’ in view of the many other factors that influence traffic fatalities. When the months of January through April are considered individually, there is no statistically significant difference between 1973 and 1974 with respect to school-age children fatal accidents in the morning for the months of March and April.<sup>25</sup>

Other studies have found that the short-term effect of DST on crashes is not statistically significant.<sup>26</sup> One review of the scientific literature found that while findings on the short-term

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Time,” *Marco Eagle*, March 9, 2018, <https://www.marconews.com/story/news/2018/03/09/no-fall-back-position-florida-legislature-passes-full-time-daylight-saving-time/406906002/>.

<sup>19</sup> See for example, *ibid.*; Zach Thaxton, “Bill Proposing Permanent Daylight Saving Time in Colorado Dies,” *KOAA News 5*, March 13, 2017.

<sup>20</sup> DOT, *The Year-Round Daylight Saving Time Study: A Report to Congress from the Secretary of Transportation*, (Interim Report), Washington, DC, June 1974; DOT, *The Daylight Saving Time Study: A Report to Congress from the Secretary of Transportation* (Final Report), Washington, DC, September 1975.

<sup>21</sup> *Ibid.*, p. ES-1.

<sup>22</sup> *Ibid.*, p. ES-2.

<sup>23</sup> The National Bureau of Standards was renamed the National Institute of Standards and Technology (NIST) in 1988.

<sup>24</sup> National Bureau of Standards, *Report to Congress: Review and Technical Evaluation of the DOT Daylight Saving Time Study*, April 1976 (Corrected June 1976), p. E-3.

<sup>25</sup> *Ibid.*, p. E-3.

<sup>26</sup> A. Huang and D. Levinson, “The Effects of Daylight Saving Time on Vehicle Crashes in Minnesota,” *Journal of Safety Research*, vol. 41 issue 6 (December 2010), pp. 513–520. T. Lahti et al., “Daylight Saving Time Transitions and Road Traffic Accidents,” *Journal of Environmental and Public Health*, vol. 2010, Article ID 657167, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2905900/>.



effects of DST were inconsistent, the long-term effects of DST suggest a positive effect.<sup>27</sup> However, the long-term results “may be attributable to factors other than light.”<sup>28</sup>

## Energy Savings

As part of P.L. 109-58, Congress directed DOE to evaluate potential energy savings that may result from extending DST. In 2008, DOE submitted a report to Congress on the effects of extended DST on U.S. energy consumption.<sup>29</sup> DOE found that the total electricity savings associated with extended DST corresponded to 0.03% decrease in electricity consumption in 2007. In terms of primary energy consumption, this represents approximately 0.02% of total U.S. energy consumption in 2007.<sup>30</sup> Regionally, areas in the northern United States exhibited larger electricity savings than areas in the southern United States. DOE reported that there was insufficient statistical evidence to indicate whether extended DST “had any measurable impact on motor gasoline consumption for passenger vehicles or traffic volume in 2007.”<sup>31</sup>

Literature reviews have reported similar savings as reported by DOE.<sup>32</sup> At least one empirical study found that DST increases electricity demand.<sup>33</sup> Aries and Newsham (2008) concluded that “existing knowledge about how DST affects electricity use is limited, incomplete, or contradictory.”<sup>34</sup> Havranek et al. (2018) conducted a literature review and found that “electricity savings are larger for countries [or areas] farther away from the equator, while subtropical regions consume more electricity because of DST.”<sup>35</sup>

## Health

Several studies have examined potential health effects related to the semiannual changing of the clock per DST. Harrison (2013) reviewed the effect of DST on sleep, and found that data from the spring and fall transition periods suggest a cumulative effect of sleep loss.<sup>36</sup> Jiddou et al. (2013) evaluated the incidence of acute myocardial infarction (AMI) with transitions to and from DST, and found evidence consistent with previously reported trends that “shifts to and from DST might be associated with transient increases and decreases in the incidence of AMI, respectively.”<sup>37</sup> A

<sup>27</sup> Rachel N. Carey and Kiran M. Sarma, “Impact of Daylight Saving Time on Road Traffic Collision Risk: A Systematic Review,” *BMJ Open*, vol. 7, issue 6 (July 2017), p. e014319.

<sup>28</sup> Ibid. Other risk factors that can effect road traffic collisions in the long-term include traffic flow and weather conditions.

<sup>29</sup> Extended DST refers to changing the start date from the first Sunday in April to the second Sunday in March and the end date from the last Sunday in October to the first Sunday in November. U.S. Department of Energy (DOE), *Impact of Extended Daylight Saving Time on National Energy Consumption: Report to Congress*, October 2008.

<sup>30</sup> DOE 2008, p. i.

<sup>31</sup> Ibid., p. 2.

<sup>32</sup> M.B. Aries and G.R. Newsham, “Effect of Daylight Saving Time on Lighting Energy Use: A Literature Review,” *Energy Policy*, vol. 36 issue 6 (June 2008), pp. 1858–1866.

<sup>33</sup> M.J. Kotchten, “Does Daylight Saving Time Save Energy? Evidence from a Natural Experiment in Indiana,” *The Review of Economics and Statistics*, vol. 93, issue 4 (November 2011), pp. 1172–1185.

<sup>34</sup> M.B. Aries and G.R. Newsham, “Effect of Daylight Saving Time on Lighting Energy Use: A Literature Review,” *Energy Policy*, vol. 36, issue 6 (June 2008), pp. 1858–1866.

<sup>35</sup> Tomas Havranek, Dominik Herman, and Zuzana Irsova, “Does Daylight Saving Save Electricity? A Meta-Analysis,” *The Energy Journal*, vol. 39, no. 2 (2018), pp. 35–61.

<sup>36</sup> Y. Harrison, “The Impact of Daylight Saving Time on Sleep and Related Behaviours,” *Sleep Medicine Reviews*, vol. 17, issue 4 (August 2013), pp. 285–292.

<sup>37</sup> Acute myocardial infarction (AMI) is the medical name for a heart attack, which refers to a blockage of blood flow



study from 2015 concluded that “specific subgroups such as men and persons with a history of AMI or prior treatment with angiotensin-converting-enzyme (ACE) inhibitors may have a higher risk for AMI during DST.”<sup>38</sup>

## Department of Transportation’s Regulatory Process

Although states may exempt themselves, in whole or in part, from DST, they cannot independently change time zones or alter the length of DST (i.e., DST begins and ends on statutorily mandated dates). There are two ways in which an area can be moved from one time zone to another: by regulation or by statute.

Under the Standard Time Act of 1918, as amended by the Uniform Time Act of 1966, moving a state or an area within a state from one time zone to another requires DOT regulation. Such a request can be made only by certain political authorities in an area.<sup>39</sup> For example, if the request for change is for one or more counties, the board (or boards) of county commissioners would make the request. If the request is for a state, the governor or the legislature would make the request.

The principles for deciding whether to change the time zone for an area are the “convenience of commerce and the existing junction points and division points of common carriers engaged in interstate or foreign commerce.”<sup>40</sup> The standard for deciding whether to change a time zone includes consideration of all the impacts upon a community that is requesting a change in its standard of time. The “convenience of commerce” is defined broadly to consider such circumstances as the shipment of goods within the community; the origin of television and radio broadcasts; the areas where most residents work, attend school, worship, or receive health care; the location of airports, railways, and bus stations; and the major elements of the community’s economy.<sup>41</sup> DOT considers this information in making its decision on time zone change proposals.<sup>42</sup>

After receiving a request, DOT determines whether it meets the minimum statutory criteria before issuing a notice of proposed rulemaking, under which it would solicit public comment and schedule a public hearing. Usually the hearing is held in the area requesting the change so that affected parties can be represented. After the comment period closes, comments are reviewed and appropriate final action is taken. If the Secretary of Transportation agrees that the statutory

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to the heart muscle. M.R. Jiddou et al., “Incidence of Myocardial Infarction with Shifts to and from Daylight Savings Time,” *The American Journal of Cardiology*, vol.111, issue 5 (March 1, 2013), pp. 631-5.

<sup>38</sup> ACE inhibitors refer to angiotensin converting enzyme inhibitors, which are medications that enlarge or dilate blood vessels, lowering blood pressure. I. Kirchberger, K. Wolf, and M. Heier, et al., “Are Daylight Saving Time Transitions Associated with Changes in Myocardial Infarction Incidence? Results from the German MONICA/KORA Myocardial Infarction Registry,” *BMC Public Health*, vol. 15 (August 14, 2015), p. 778. <https://doi.org/10.1186/s12889-015-2124-4>.

<sup>39</sup> According to DOT, “DOT will generally begin a rulemaking proceeding to change a time zone boundary if the highest elected officials in the area submit a petition requesting a time zone change and provide adequate data supporting the proposed change.” See DOT, “Standard Time Zone Boundary in Southwest Indiana,” 72 *Federal Register* 54367, September 25, 2007.

<sup>40</sup> 15 U.S.C. §261.

<sup>41</sup> DOT, “Procedure for Moving an Area from One Time Zone to Another,” April 30, 2013, <https://www.transportation.gov/regulations/procedure-moving-area-one-time-zone-another>.

<sup>42</sup> For an example of the procedure that resulted in a decision by DOT that the requested proposed change suited “the convenience of commerce,” see DOT, “Relocation of Standard Time Zone Boundary in the State of North Dakota: Mercer County,” 75 *Federal Register* 60004-60008, September 29, 2010.

requirement has been met, the change would be instituted, usually at the next changeover to or from DST.<sup>43</sup>

## Selected State Actions to Change DST Observance

Even though a state cannot unilaterally go on year-round DST, a majority of states have initiated efforts to change the summer observance of DST. Many state legislative actions have occurred since 2015.<sup>44</sup> CRS identified that 39 states have introduced legislation that would support changes to the summer observance of DST as of June 2019.<sup>45</sup> At least 29 states have introduced legislation proposing some variation of permanent DST.<sup>46</sup> Similarly, at least 26 states have introduced legislation to establish permanent standard time, and 5 states have introduced legislation to study the effects of DST or the effects of changing the observance of DST.

Some of the legislative proposals, if enacted, would be contingent upon the actions of neighboring states. For example, Oregon S.B. 320 would effectively require the entire state to observe Mountain Standard Time year-round, should the standard of time in California and Washington be advanced by one hour.<sup>47</sup> In addition, four states in New England—Maine, Massachusetts, New Hampshire, and Rhode Island—have reportedly created commissions or introduced proposals to move to year-round DST.<sup>48</sup> These proposals would reportedly change the standard time zone from Eastern Standard Time to Atlantic Standard Time (i.e., one hour ahead), which would effectively adopt daylight saving time all year round.<sup>49</sup> In November 2017, the Massachusetts state commission submitted its recommendation “that under certain circumstances the Commonwealth could make a data-driven case for moving to the Atlantic Time Zone year-round (effectively observing year-round DST).”<sup>50</sup>

**Table 1** lists the states that have introduced legislation proposing changes to the summer observance of DST or have proposed to study the effects of DST.

<sup>43</sup> For example, the change in the standard time zone boundary for Mercer County, ND, took effect at the conclusion of DST observance on Sunday, November 7, 2010; see, DOT, “Relocation of Standard Time Zone Boundary in the State of North Dakota: Mercer County,” 75 *Federal Register* 60004, September 29, 2010.

<sup>44</sup> Prior to 2015, legislation was introduced in the Louisiana legislature in 2003, 2006, and 2010 that sought to make DST permanent standard time.

<sup>45</sup> CRS identified state actions through searches (conducted on May 22, 2018, and May 17, 2019) that included news articles, the National Council of State Legislatures website, Lexis Advanced database, and state legislature websites.

<sup>46</sup> States have taken different legislative approaches. Some would seek to implement year-round DST to advance time by one hour compared to the previous time. Others would request DOT to change a state’s time zone to one that is one hour ahead and then exempting the state from DST observance, which would achieve the same effect—advance time by one hour compared to the previous time.

<sup>47</sup> Oregon is located within both the Pacific Time zone and the Mountain Time zone.

<sup>48</sup> Maggie Astor, “Year-Round Daylight Saving Time? Florida Says Yes, but It’s Not So Simple,” *The New York Times*, March 8, 2018, <https://www.nytimes.com/2018/03/08/us/daylight-saving-time-florida.html>.

<sup>49</sup> Nik DeCosta-Klipa, “Could New England Actually Change Time Zones—And What Happens If It Does?,” *Boston.com*, November 5, 2017, <https://www.boston.com/news/local-news/2017/11/05/new-england-atlantic-time-zone>.

<sup>50</sup> Commonwealth of Massachusetts Special Commission, *Report of the Special Commission on the Commonwealth’s Time Zone*, November 1, 2017, p. 25.

**Table 1. States Introducing Daylight Saving Time Observance Legislation: 2015-2019**  
A Breakdown of Legislation by Type

State	Permanent DST	Permanent Standard Time	Study the Effects of DST
Alabama	x	x	
Alaska		x	
Arkansas	x <sup>a</sup>	x	
California	x	x	
Colorado	x	x	
Connecticut	x	x	
Florida	x <sup>b</sup>	x	
Idaho	x <sup>c</sup>	x	
Illinois	x	x	
Iowa	x		
Kansas		x	
Louisiana			x
Maine	x		
Massachusetts	x		x
Michigan		x	
Minnesota	x	x	
Mississippi	x	x	
Missouri	x	x	
Montana		x	
Nebraska		x	
Nevada	x		
New Hampshire	x		
New Mexico	x	x	
New York			x
North Carolina	x		
North Dakota		x	
Ohio	x		
Oklahoma	x	x	
Oregon	x	x	
Pennsylvania	x	x	x
Rhode Island	x		
South Carolina	x		x
South Dakota		x	
Tennessee	x <sup>d</sup>		
Texas		x	
Utah	x	x	
Vermont	x		
Washington	x <sup>e</sup>	x	
Wyoming	x	x	

**Sources:** Lexis Advanced database (“Statutes and Legislation” database); state legislature websites/databases; National Council of State Legislature (NACL) website

**Notes:** The table reflects those legislative efforts by states that were identified in the search conducted on May 22, 2018, and May 17, 2019.

- a. Arkansas adopted H.R. 1034, a non-binding resolution to establish permanent DST, on March 12, 2019.
- b. Florida’s House and Senate passed H.B. 1013 (“Sunshine Protection Act”) and the bill was approved by Governor Scott on March 23, 2018.
- c. Idaho’s proposal would only apply to the 10 northern counties that are currently in the Pacific Standard Time should the state of Washington move from Pacific Standard Time to Mountain Standard Time (i.e., one hour ahead) and exempt itself from DST, effectively implementing year-round DST. For more on Idaho’s proposal, see Senate Concurrent Resolution 138, 64<sup>th</sup> Legislature of the State of Idaho (2018). <https://legislature.idaho.gov/sessioninfo/2018/legislation/scr138/>
- d. Tennessee’s House and Senate passed H.B. 247 (“Establishes daylight saving time as the standard time in Tennessee”) and the bill was signed by Governor Lee on May 21, 2019.
- e. Washington’s House and Senate passed H.B. 1196 (“Allowing for the year round observation of daylight saving time”) and the bill was signed into law by Governor Inslee on May 8, 2019.

Three states have recently enacted permanent DST legislation: Florida, Washington, and Tennessee. On March 23, 2018, Florida Governor Scott approved H.B. 1013, the Sunshine Protection Act,<sup>51</sup> which would institute year-round DST in Florida “if the United States Congress amends 15 U.S.C. §260a to authorize states to observe daylight saving time year-round.”

Tennessee and Washington have passed similar legislation to institute year-round DST in 2019. Washington Governor Inslee signed H.B. 1196 “allowing for the year round observation of daylight saving time” on May 8, 2019.<sup>52</sup> Tennessee Governor Lee signed H.B. 247, “establishing daylight saving time as the standard time in Tennessee,” on May 21, 2019.<sup>53</sup>

Another recent course of action to establish permanent DST or permanent standard time is by state-wide ballot measures. Several states have either voted on a ballot measure (California) or have ballot initiatives which could appear in the upcoming November 2020 general election (Colorado, Missouri, and Texas).

Californians voted on Proposition (Prop) 7 in the November 6, 2018, general election and the measure passed, receiving nearly 60% of the votes.<sup>54</sup> Prop 7 allows the California State Legislature to vote on establishing permanent DST in the state. The measure requires both chambers in the legislature to pass a bill by a two-thirds majority vote and the change to be “consistent with federal law.”<sup>55</sup> In response to the passage of Prop 7, the California State Assembly introduced AB-7 in December 2018 and passed the bill (72-8) on May 9, 2019.<sup>56</sup> The bill currently resides in the State Senate awaiting further action.

In March 2019, the Texas State House of Representatives introduced both a joint resolution (H.J.R. 117) and a bill (H.B. 3784) to amend the state constitution and authorize “a statewide referendum allowing voters to indicate a preference for observing standard time year-round or observing daylight saving time year-round.”<sup>57</sup> The State House passed both the resolution—with

<sup>51</sup> For more information on HB 1013, see <http://www.flsenate.gov/Session/Bill/2018/01013/?Tab=BillHistory>.

<sup>52</sup> For more information on HB 1196, see <https://app.leg.wa.gov/bills/bills/summary/BillNumber=1196&Year=2019>.

<sup>53</sup> For more information on HB 247, see <http://wapp.capitol.tn.gov/apps/BillInfo/Default.aspx?BillNumber=HB0247>.

<sup>54</sup> California Secretary of State, *California Statement of Vote—November 6, 2018*, p.16.

<sup>55</sup> California Secretary of State, California General Election, November 6, 2018; “Proposition 7 Summary.”

<sup>56</sup> For more information on AB-7, see [https://leginfo.legislature.ca.gov/faces/billHistoryClient.xhtml?bill\\_id=20190200AB7](https://leginfo.legislature.ca.gov/faces/billHistoryClient.xhtml?bill_id=20190200AB7).

<sup>57</sup> For more information on H.J.R. 117 and H.B. 3784, see <https://capitol.texas.gov/BillLookup/Actions.aspx?LegSess=>

a required two-thirds majority (133-9)—and bill on April 24 and April 25, 2019, respectively.<sup>58</sup> Both await consideration in the State Senate. If approved, the referendum would appear on the state-wide November 2020 ballot.

Colorado and Missouri have approved DST initiatives which could appear on their respective state-wide ballots for the November 2020 general election. Colorado's Initiative 54 ("Daylight Saving Time") would make "the year-round standard time in Colorado daylight saving time that is one hour later than United States Mountain Standard time."<sup>59</sup> Missouri's Initiative Petition 55 would amend the state constitution "to eliminate daylight saving time in Missouri."<sup>60</sup> Both initiatives require a specified number of valid signatures from registered voters by a set deadline date to qualify for the November 2020 ballot.<sup>61</sup>

### Ending the Changing of Clocks in the European Union

In the European Union (EU), the time period for DST (referred to as the "Summer-time period") begins at 1 a.m. Greenwich Mean Time (GMT) on the last Sunday in March and ends at 1 a.m. GMT on the last Sunday in October in all member states.<sup>62</sup> On March 26, 2019, the European Parliament voted in favor of a proposal to discontinue the seasonal observance.<sup>63</sup> Discontinuation of the seasonal observance would occur in 2021. The proposal would allow EU member states to decide whether to advance to summer time in March of 2021 and remain in summer time thereafter, or to revert to standard time ("winter time") in October of 2021 and remain in winter time thereafter. Member states are to notify the European Commission (the EU's executive body) by April 1, 2020, at the latest as to the decision to observe summer time or winter time.<sup>64</sup> According to the text approved by the European Parliament, the decision should take into account "citizens' preferences, geographical variations, regional differences, standard working arrangements and other factors." The proposal would allow postponement of the application of the directive to protect the functioning of the internal market. In addition, the proposal requires an assessment of the application and implementation of the directive to be submitted to the European Parliament and to the Council of the EU (in which the member states are represented) by December 31, 2025. The Council would also need to approve the proposal to end the seasonal time change for it to take effect as EU law.

## Potential Issues for Congress

Congress may again consider whether to make changes to DST observance or standard time. In the 115<sup>th</sup> Congress, four bills were introduced that would have made changes to standard time.

86R&Bill=HJR117 and <https://capitol.texas.gov/BillLookup/Actions.aspx?LegSess=86R&Bill=HB3784>.

<sup>58</sup> According to the Texas Legislative Council (TLC), "Joint resolutions proposing amendments to the Texas Constitution require a vote of two-thirds of the total membership of each chamber for adoption. Other joint resolutions require a simple majority vote in each chamber for adoption." See TLC, "The Legislative Process in Texas," November 2018, p. 7.

<sup>59</sup> For more information on Colorado Initiative 54, see <https://www.sos.state.co.us/pubs/elections/Initiatives/titleBoard/index.html>.

<sup>60</sup> For more information on Missouri Initiative Petition 55, see <https://www.sos.mo.gov/petitions/2020IPcirculation#2020055>.

<sup>61</sup> For number of required signatures and specified deadline dates, see [https://ballotpedia.org/Colorado\\_Permanent\\_Daylight\\_Saving\\_Time\\_Initiative\\_\(2019\)](https://ballotpedia.org/Colorado_Permanent_Daylight_Saving_Time_Initiative_(2019)) and [https://ballotpedia.org/Missouri\\_End\\_Daylight\\_Saving\\_Time\\_Initiative\\_\(2020\)](https://ballotpedia.org/Missouri_End_Daylight_Saving_Time_Initiative_(2020)).

<sup>62</sup> European Parliament and the Council of the European Union, Directive 2000/84/EC of the European Parliament and of the Council of 19 January 2001 on summer-time arrangements.

<sup>63</sup> European Parliament, "Parliament Backs Proposal to End Switch Between Summer and Winter Time in 2021," press release, March 26, 2019, <http://www.europarl.europa.eu/news/en/press-room/20190321IPR32107/parliament-backs-proposal-to-end-switch-between-summer-and-winter-time-in-2021>.

<sup>64</sup> European Parliament Legislative Observatory, "Text Adopted by Parliament, 1<sup>st</sup> Reading/Single Reading," March 26, 2019, <https://oeil.secure.europarl.europa.eu/oeil/popups/summary.do?id=1579670&t=e&l=en>.

The four bills introduced were two sets of related House and Senate bills: the Sunshine State Act (S. 2536 and H.R. 5278) and the Sunshine Protection Act of 2018 (S. 2537 and H.R. 5279).

In the 116<sup>th</sup> Congress, four bills have been introduced which would allow states to observe daylight saving time year-round: a set of House and Senate companion bills, the Sunshine Protection Act of 2019 (S. 670 and H.R. 1556); and two stand-alone bills, H.R. 1601 (Daylight Act) and H.R. 2389. The Sunshine Protection Act of 2019 would make daylight saving time permanent for most states and areas in the United States by advancing standard time one hour (with exemptions for states and areas that do not observe DST on the day before enactment). H.R. 1601 and H.R. 2389 would provide additional flexibility in DST observance by adding an option for year-long DST observance.

Information on the benefits and costs of DST changes with its current length compared to year-round observance (or other variations) may be of congressional interest. On March 12, 2018, the House Committee on Energy and Commerce sent a letter to the Department of Transportation requesting updated information related to DST and standard time “to more fully appreciate the various policy factors associated with changing between Standard and [DST].”<sup>65</sup> DOT responded to the committee with a letter on June 20, 2018, stating the Department has “initiated a literature review of this issue” and it “will share the results” once completed.<sup>66</sup> As of June 2019, the committee has not received the results of the literature review.

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<sup>65</sup> Letter from Representative Greg Walden, Chairman of the House Committee on Energy and Commerce, to the Honorable Elaine Chao, Secretary of the U.S. Department of Transportation, March 12, 2018, <https://republicans-energycommerce.house.gov/wp-content/uploads/2018/03/031218-DOT-Daylight-Saving-Time-Input.pdf>.

<sup>66</sup> Letter from The Honorable Elaine Chao, Secretary of the U.S. Department of Transportation, to Representative Greg Walden, Chairmen of the House Committee on Energy and Commerce, June 20, 2018, <https://republicans-energycommerce.house.gov/wp-content/uploads/2018/11/07.05.18-DOT-Daylight-Savings.pdf>.

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