

and Pensions be discharged from further consideration of and the Senate now proceed to the consideration of S. Res. 346.

The PRESIDING OFFICER. Without objection, it is so ordered.

The clerk will report the resolution by title.

The assistant bill clerk read as follows:

A resolution (S. Res. 346) recognizing the importance and effectiveness of trauma-informed care.

There being no objection, the Senate proceeded to consider the resolution.

Mr. RUBIO. Madam President, I ask unanimous consent that the resolution be agreed to, the preamble be agreed to, and the motions to reconsider be considered made and laid upon the table.

The PRESIDING OFFICER. Without objection, it is so ordered.

The resolution (S. Res. 346) was agreed to.

The preamble was agreed to.

(The resolution, with its preamble, is printed in the RECORD of December 1, 2017, under "Submitted Resolutions.")

#### AUTHORIZING TESTIMONY AND REPRESENTATION

Mr. RUBIO. Madam President, I ask unanimous consent that the Senate proceed to the consideration of S. Res. 519, submitted earlier today.

The PRESIDING OFFICER. The clerk will report the resolution by title.

The assistant bill clerk read as follows:

A resolution (S. Res. 519) to authorize testimony and representation in Colorado v. Willenberg.

There being no objection, the Senate proceeded to consider the resolution.

Mr. RUBIO. Madam President, I ask unanimous consent that the resolution be agreed to, the preamble be agreed to, and the motions to reconsider be considered made and laid upon the table with no intervening action or debate.

The PRESIDING OFFICER. Without objection, it is so ordered.

The resolution (S. Res. 519) was agreed to.

The preamble was agreed to.

(The resolution, with its preamble, is printed in today's RECORD under "Submitted Resolutions.")

#### ORDERS FOR WEDNESDAY, MAY 23, 2018

Mr. RUBIO. Madam President, I ask unanimous consent that when the Senate completes its business today, it adjourn until 11 a.m., Wednesday, May 23; further, that following the prayer and pledge, the morning hour be deemed expired, the Journal of proceedings be approved to date, the time for the two leaders be reserved for their use later in the day, and morning business be closed. Finally, I ask that following

leader remarks, the Senate proceed to executive session and proceed to the consideration of the Montgomery nomination under the previous order.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### ORDER FOR ADJOURNMENT

Mr. RUBIO. Madam President, if there is no further business to come before the Senate, I ask unanimous consent that it stand adjourned under the previous order, following the remarks of Senator WHITEHOUSE.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. RUBIO. Madam President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. WHITEHOUSE. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. RUBIO). Without objection, it is so ordered.

#### CLIMATE CHANGE

Mr. WHITEHOUSE. Mr. President, in this, my 20th speech about the climate changes and ocean changes being driven by fossil fuels, I would like to discuss America's largest oil company, ExxonMobil.

For decades, ExxonMobil did everything in its power to deceive the American public about the existence and causes of climate change. I believe that full transparency would show ExxonMobil and its agents still obstructing efforts here in Washington to resolve the climate crisis, but I want to focus on one particular audience I believe Exxon has long misled—its shareholders. An Exxon CEO once went so far as to cite a bogus scientists petition to his shareholders—yes, that infamous "petition" cooked up by climate deniers that included cartoon characters and Spice Girls among the scientists.

For decades, Exxon investors have filed resolutions at shareholder meetings starting back as far as 1990 urging ExxonMobil to address climate and sustainability issues. Exxon succeeded in quashing every single one of them—quashing more than 40 shareholder resolutions in total, year after year—until last year.

At last year's meeting, big institutional investors like BlackRock threw their weight behind a resolution requiring Exxon to produce an annual report explaining how it will be affected by climate change and global efforts to protect us against climate change. Again, Exxon fiercely opposed this resolution, but this time Exxon lost. The resolution passed with 62 percent of the vote.

That gave Exxon some serious questions to answer: As the world transitions to a low-carbon economy, how

much oil and gas does Exxon think we will need? How might declining demand for oil and gas affect Exxon's operations and bottom line? Will it be economical to produce all of the reserves currently listed on Exxon's books? Most significantly, can we burn all Exxon's reserves and not damage the planet?

Well, Exxon's inaugural climate risk report is out—I have been through it—and it looks to me like they are still playing hide the ball. It looks to me like a report that started with the conclusion that Exxon can develop all its reserves and then back-calculated the assumptions necessary to get to that conclusion. Let's have a look.

Scientists tell us that we must limit global warming to no more than 2 degrees Celsius if we are to avoid catastrophic changes to the planet we inhabit. Many believe that to keep a margin of safety, we actually need to target 1.5 degrees.

There is an article that just came out today headlined "Limiting warming to 1.5 degree C would save majority of global species from climate change." To quote the article, it would "avoid half the risks associated with warming of 2 degrees C." So there is a big difference of outcomes between 2 degrees Centigrade and 1.5 degrees Centigrade, and it will affect innumerable species on our planet.

Well, in its report, Exxon doesn't address the 1.5 degrees scenario; it goes with 2 degrees.

Exxon's report goes on to say that its roughly 20 billion oil-equivalent barrels of reserves "face little risk" from efforts to meet the 2 degrees scenario. Exxon also says it is "confident" about roughly 71 billion not-yet-proven oil-equivalent barrels that it reports to its shareholders as assets. It claims that no more than 5 percent of these unproven resources will be rendered uneconomical by measures to protect us against climate change.

Exxon's report obviously gets to the result management wants: to tell shareholders that basically all its listed assets are recoverable. But look at the assumptions required to arrive at that conclusion beyond the 2-degree assumption.

One assumption is huge amounts of carbon capture and sequestration, what is called CCS. CCS is technology where carbon emissions are contained at the site where the fossil fuel is burned and then captured and buried far underground. This prospect exists but barely exists now. Its future development is something that is projected by the International Energy Agency.

This graphic shows the projection by the International Energy Agency of the various elements that will reduce carbon pollution in the future.

The top one is efficiency gains, burning less because of better insulation and so forth, because motors become more efficient.

This green one is all the contribution to carbon reduction of renewable energy.

This bottom, dark-blue segment is what the International Energy Agency attributes to CCS, carbon capture and sequestration.

For its report, ExxonMobil assumed deployment of CCS technology as much as five times greater by 2040—this year depicted right here—five times greater than the IEA’s projection. If you take IEA’s CCS projection and you quintuple it, you get carbon savings that exceed everything IEA projects from efficiency and renewables combined. That is quite an assumption. CCS is actually very expensive, and all it produces is carbon reduction. You still have to run the fossil fuel-burning powerplant to make the power, and then, on top of that, you add the carbon capture and sequestration technology that can add \$1 billion to the price of the equipment.

So here is Lazard’s comparison of various kinds of energy costs. This bottom one is solar. Per megawatt hour, it runs \$46 to \$61—pretty efficient. This is onshore wind—\$32 to \$62 per megawatt hour produced. This is natural gas; it runs from \$48 to \$78. Then you add on \$25, more or less, per megawatt hour for carbon capture and sequestration, and now you have a very expensive product—about \$100 per megawatt hour compared to \$46 to \$61, for instance, for solar.

If that is the case, it is a little surprising because you would think that renewables would do better than CCS because they come out far more cheaply. So how do you get to an assumption of a world in which CCS outcompetes renewables? It seems improbable, given the pricing, that CCS will roar ahead of renewables, let alone ahead of renewables and efficiency combined. If that were true, what a booming market CCS would be to invest in.

So let’s test Exxon’s CCS assumption against Exxon’s own investment behavior. If Exxon truly saw carbon capture and sequestration as the magic bullet to allow it to produce all its oil and gas reserves, you would expect that it would put its money where its mouth is, but Exxon barely even mentions CCS in its 2017 10-K filing for investors. There is one tiny mention right here under its “Risk Factors” section. Risk factors.

If you look at Exxon’s announced investments in the United States this year—\$50 billion worth—it makes no mention of any new investments in carbon capture and sequestration. If Exxon really believed that CCS was going to boom like that, bigger than renewables, why not invest more? My hypothesis is that they don’t believe that, that this was just an assumption backed into this report to make it look as if Exxon was going to be able to protect and use all of its reserves to get to the foreordained conclusion.

Exxon’s report omits another fact about CCS: that this developing technology will likely see most use with gas-fired powerplants, as my previous graphic showed. It likely cannot be

used to capture Exxon’s products’ emissions in the transportation and chemical sectors. Power generation accounts for only about one-seventh of total demand for oil and gas, and that share is predicted to fall. Even if it doesn’t fall, that still leaves six-sevenths where it is hard to see a carbon capture and sequestration offset. Exxon’s report does not describe where exactly this massive deployment of carbon capture and sequestration will take place, but I can assure you it will not be on auto tailpipes.

Let’s move on from CCS.

A second odd assumption in Exxon’s report is the growth rate Exxon predicts for renewable energy. Exxon claims that renewables will grow only by 4.5 percent annually through 2040. Well, the IEA, the International Energy Agency, reports that in 2017—the year we just went through—renewable energy actually grew by 6.3 percent. Well, 6.3 percent is the actual, and they assume it will grow only at 4.5 percent. And that 6.3 percent occurred with massive global subsidies still giving huge advantages to fossil fuel. If you go down the street to Exxon’s rival BP, BP predicts that renewables growth will average 6.5 percent annually through 2040.

Exxon claims—although we who live here know it is not true—to support a price on carbon that would obviously lower fossil fuel’s huge subsidy advantage, that would give renewables a fairer shot, and that would presumably accelerate renewables growth above the 2017 rate of 6.3 percent.

Is Exxon’s low-growth assumption realistic for renewable energy? Well, new solar and wind energy products are already becoming more economical than existing coal plants, as we just saw in Colorado. New solar and wind projects now compete on price with new natural gas plants, as a recent auction in Arizona showed. The cost trajectory for renewables continues steeply downward.

This downward curve is the cost of centralized solar power, like those big arrays of mirrors that focus solar on a generator. This steeply downward curve is the downward curve of photovoltaic, the types of arrays that go out on their own in fields or on rooftops. This is the downward curve of offshore wind energy, and this is the downward curve of onshore wind energy. All of these renewable sources are on a steep downward trajectory. So why would growth slow?

Here, again, Exxon made an assumption that does not seem plausible, but the assumption does help it arrive at its desired conclusion that it can develop essentially all its assets.

Here is a third questionable Exxon assumption. Exxon predicts that the market for electric cars and trucks will grow slowly, if at all. Exxon assumes that by 2040 only 160 million out of roughly 2 billion cars—just 8 percent of the automobile fleet—will be electric vehicles. By contrast, the IEA predicts

that roughly twice that many cars will be electric by 2040. Most other projections I have seen are even more bullish for electric vehicles, like this one from Bloomberg, which predicts well over 400 million electric vehicles by 2040. Indeed, just the new sales in these 4 years exceed the entire market prediction of electric vehicles for ExxonMobil.

Stanford economist Tony Seba studies economic disruptions. He is fond of showing two photos of Fifth Avenue in New York City. In this photo, taken in 1900, you see the parade of traffic on Fifth Avenue. If you look, you will see that every single one of those vehicles is pulled by a horse, except one. There is one vehicle right here with an engine in it. It is 1900, and the entire street is filled with horse-drawn carriages, with just one vehicle in that street scene.

Cut forward to 1913, and Fifth Avenue is again filled with vehicles, only this time it is hard to find a horse. There is a vehicle right here that looks as though it is a carriage, and there may be a horse behind this vehicle. But other than that, all of the vehicles that you see are gasoline powered.

In just 13 years, the automotive world, the travel world changed, illustrating Dr. Seba’s point that major economic disruptions can take place in remarkably little time. Think cell phone and landline, if you want a modern example.

There is a lot of evidence that electric vehicles present just this sort of economic and technological disruption. Governments in major auto markets like France and the United Kingdom have announced the end of internal combustion vehicle sales by 2040. China, the world’s largest car market, recently announced that by 2025, 20 percent of new cars sold there must run on alternative fuels, and it is on its way to an eventual total ban of the sale of gasoline- and diesel-powered cars. Japan, the world’s fourth largest car market, now has more electric charging stations than gas stations. India, the fifth largest car market, has announced that by 2030, all new cars sold there must be electric or hybrid. Electric cars are cheaper to build, to operate, and to repair, and they can provide supercar performance in everyday vehicles.

Moving on from regular automobiles and into the commercial fleet, Exxon makes the further assumption that no commercial transportation—no buses, no trucks—will be electrified by 2040. Never mind that electric buses are already in use in China, Germany, France, the United States, and many other countries. Rhode Island’s public transit agency is going out to bid for electric buses right now. An American manufacturer asserts that once electric buses get 10 percent market share, complete transition to electric becomes inevitable. Just last year, the city of Shenzhen in China replaced its entire fleet of more than 16,000 buses with electric ones. Almost 20 percent of buses across China are already electric.

There are now almost 400,000 electric buses on the road worldwide. Tesla recently announced plans to produce 100,000 electric trucks per year by 2023.

Well, maybe everyone else is wrong and Exxon is right, but it sure looks as though Exxon investors aren't getting the complete story from this report. It looks as though they are getting the assumptions that produce the answer that Exxon wants. Cars and commercial transportation account for more than 50 percent of the demand for oil and gas, so if Exxon fudged this assumption, that has big consequences for the conclusion Exxon reaches that all will be well with its reserves.

Stack up all those assumptions—that 2 degrees is the right climate threshold, that CCS will boom and even impact gasoline markets, that renewable energy growth will slow rather than accelerate, and that electric vehicles will be a bust. It takes all of those assumptions piled together to get to Exxon's desired result. It looks and smells bogus. If you don't believe me, let me leave you with one last chart.

Rystad Energy is an international energy consulting firm widely used and respected in the energy industry. 2C Energy is an American firm looking at how oil companies' resources and reserves fare as we face climate risks. Rystad and 2C worked together to develop this carbon consumption budget for various oil and gas and energy companies using, by the way, the more generous 2-degrees scenario for global warming. So we will spot them the 2 degrees, but it would obviously be different if it were only 1.5.

This is ExxonMobil right here. The study shows that ExxonMobil, in their best case scenario—this upper sce-

nario—is able to extract and burn only 82 percent of its oil and gas assets. The other 18 percent would be left unused or stranded—stranded assets.

But wait. If you look at this scenario where methane leakage is allowed to continue from oil and gas drilling, which, by the way, is exactly what Exxon and others are encouraging Scott Pruitt to allow and where CCS technology is not significantly deployed, then this scenario here leaves 39 percent of Exxon's assets stranded. That is 39 percent of all assets stranded versus what Exxon claims, which is that 5 percent of unproven resources might be. By the way, again, that 39 percent stranding is based on 2 degrees of warming, not the more prudent 1.5 degrees, which would require less development of those resources.

Well, Exxon's 2018 shareholder meeting comes up next week, and the investors who did such a great job with last year's climate resolution should take a look at this report and not be satisfied. There are some questions that need to be answered. Even a former senior Exxon executive has criticized Exxon's climate risk report as flawed and insufficiently detailed. In an op-ed for CNBC, the former executive, Bill Hafker, writes that "oil and gas companies must take Paris climate targets seriously" and says that investors should be dissatisfied with Exxon's climate risk report because it doesn't do this.

If Exxon, in fact, started with the answer it wanted and worked backward to plug in whatever array of unlikely assumptions would get them that fore-ordained answer, well, then BlackRock and other institutional investors who forced this report should demand that Exxon do better.

Earlier this year, BlackRock's CEO Larry Fink wrote to the CEOs of the companies in which BlackRock invests. He urged them to "serve a social purpose." He urged them to "make a positive contribution to society." Well, where the underlying issue is as vital as the stability of our climate and oceans and where the company involved is as immense as ExxonMobil, cooking the numbers not only harms investors, it is a full-on hazard to human society.

I yield the floor.

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ADJOURNMENT UNTIL 11 A.M.  
TOMORROW

The PRESIDING OFFICER. Under the previous order, the Senate stands adjourned until 11 a.m., Wednesday, May 23, 2018.

Thereupon, the Senate, at 6:29 p.m., adjourned until Wednesday, May 23, 2018, at 11 a.m.

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#### CONFIRMATIONS

Executive nominations confirmed by the Senate May 22, 2018:

##### CONSUMER PRODUCT SAFETY COMMISSION

DANA BAIOTTO, OF OHIO, TO BE A COMMISSIONER OF THE CONSUMER PRODUCT SAFETY COMMISSION FOR A TERM OF SEVEN YEARS FROM OCTOBER 27, 2017.

##### DEPARTMENT OF JUSTICE

CHERYL A. LYDON, OF SOUTH CAROLINA, TO BE UNITED STATES ATTORNEY FOR THE DISTRICT OF SOUTH CAROLINA FOR THE TERM OF FOUR YEARS.

SONYA K. CHAVEZ, OF NEW MEXICO, TO BE UNITED STATES MARSHAL FOR THE DISTRICT OF NEW MEXICO FOR THE TERM OF FOUR YEARS.

SCOTT E. KRACL, OF NEBRASKA, TO BE UNITED STATES MARSHAL FOR THE DISTRICT OF NEBRASKA FOR THE TERM OF FOUR YEARS.

J. C. RAFFETY, OF WEST VIRGINIA, TO BE UNITED STATES MARSHAL FOR THE NORTHERN DISTRICT OF WEST VIRGINIA FOR THE TERM OF FOUR YEARS.