

1 RIO TINTO ENERGY AMERICA INC.; RIO
2 TINTO MINERALS, INC.; RIO TINTO
3 SERVICES INC.; STATOIL ASA;
4 ANADARKO PETROLEUM CORP.;
5 OCCIDENTAL PETROLEUM CORP.;
6 OCCIDENTAL CHEMICAL CORP.; REPSOL
7 S.A.; REPSOL ENERGY NORTH AMERICA
8 CORP.; REPSOL TRADING USA CORP.;
9 MARATHON OIL COMPANY; MARATHON
10 OIL CORPORATION; MARATHON
11 PETROLEUM CORP.; HESS CORP.; DEVON
12 ENERGY CORP.; DEVON ENERGY
13 PRODUCTION COMPANY, L.P.; ENCANA
14 CORP.; APACHE CORP.; and DOES 1
15 through 100, inclusive,

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Defendants.

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1 **I. INTRODUCTION**

2 1. Defendants, major corporate members of the fossil fuel industry, have known for
3 nearly a half century that unrestricted production and use of their fossil fuel products create
4 greenhouse gas pollution that warms the planet and changes our climate. They have known for
5 decades that those impacts could be catastrophic and that only a narrow window existed to take
6 action before the consequences would not be reversible. They have nevertheless engaged in a
7 coordinated, multi-front effort to conceal and deny their own knowledge of those threats, discredit
8 the growing body of publicly available scientific evidence, and persistently create doubt in the
9 minds of customers, consumers, regulators, the media, journalists, teachers, and the public about
10 the reality and consequences of the impacts of their fossil fuel pollution. At the same time,
11 Defendants have promoted and profited from a massive increase in the extraction and consumption
12 of oil, coal, and natural gas, which has in turn caused an enormous, foreseeable, and avoidable
13 increase in global greenhouse gas pollution and a concordant increase in the concentration of
14 greenhouse gases,¹ particularly carbon dioxide (“CO₂”) and methane, in the Earth’s atmosphere.
15 Those disruptions of the Earth’s otherwise balanced carbon cycle have substantially contributed
16 to a wide range of dire climate-related effects, including global warming, rising atmospheric and
17 ocean temperatures, ocean acidification, melting polar ice caps and glaciers, more extreme and
18 volatile weather, and sea level rise.² Plaintiffs, the People of the State of California and City of
19 Imperial Beach,³ along with the City’s residents, taxpayers, and infrastructure, suffer the
20 consequences.

21 2. Defendants are vertically integrated extractors, producers, refiners, manufacturers,
22 distributors, promoters, marketers, and sellers of fossil fuel products. Decades of scientific
23 research show that pollution from the production and use of Defendants’ fossil fuel products plays
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25 ¹ As used in this Complaint, “greenhouse gases” refers collectively to carbon dioxide, methane, and nitrous oxide.
26 Where a source refers to a specific gas or gases, or when a process relates only to a specific gas or gases, this
27 Complaint refers to them by name.

28 ² Exhibit A, attached to this Complaint, is a timeline highlighting information alleged in the paragraphs below. The
29 timeline illustrates what the fossil fuel companies knew, when they knew it, and what they failed to do to prevent the
30 environmental effects that are now imposing real costs on people and communities around the country. The
31 information comes from key industry documents and other sources.

³ As used in this Complaint, “Imperial Beach” refers to all areas within the geographic boundaries of the City.

1 a direct and substantial role in the unprecedented rise in emissions of greenhouse gas pollution and
2 increased atmospheric CO₂ concentrations since the mid-20th century. This dramatic increase in
3 atmospheric CO₂ and other greenhouse gases is the main driver of the gravely dangerous changes
4 occurring to the global climate.

5 3. Anthropogenic (human-caused) greenhouse gas pollution, primarily in the form of
6 CO₂, is far and away the dominant cause of global warming and sea level rise.⁴ The primary source
7 of this pollution is the extraction, production and consumption of coal, oil, and natural gas, referred
8 to collectively in this Complaint as “fossil fuel products.”⁵

9 4. The rate at which Defendants have extracted and sold fossil fuel products has
10 exploded since the Second World War, as have emissions from those products. The substantial
11 majority of all greenhouse gas emissions in history has occurred since the 1950s, a period known
12 as the “Great Acceleration.”⁶ About three quarters of all industrial CO₂ emissions in history have
13 occurred since the 1960s,⁷ and more than half have occurred since the late 1980s.⁸ The annual rate
14 of CO₂ emissions from production, consumption and use of fossil fuels has increased by more than
15 60% since 1990.⁹

16 5. Defendants have known for nearly 50 years that greenhouse gas pollution from their
17 fossil fuel products has a significant impact on the Earth’s climate and sea levels. Defendants’
18 awareness of the negative implications of their own behavior corresponds almost exactly with the
19 Great Acceleration, and with skyrocketing greenhouse gas emissions. With that knowledge,

21 ⁴See IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth
22 Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A.
Meyer (eds.)]. IPCC, Geneva, Switzerland. Page 6, Figure SMP.3, <https://www.ipcc.ch/report/ar5/syr/>.

23 ⁵ See C. Le Quéré et al., Global Carbon Budget 2016, *Earth Syst. Sci. Data* 8, 632 (2016), [http://www.earth-syst-sci-](http://www.earth-syst-sci-data.net/8/605/2016/)
24 [data.net/8/605/2016/](http://www.earth-syst-sci-data.net/8/605/2016/). Cumulative emissions since the beginning of the industrial revolution to 2015 were 413 GtC
attributable to fossil fuels, and 190 GtC attributable to land use change. *Id.* Global CO₂ emissions from fossil fuels
and industry remained nearly constant at 9.9 GtC in 2015, distributed among coal (41 %), oil (34 %), gas (19 %),
cement (5.6 %), and gas flaring (0.7 %). *Id.* at 629.

25 ⁶ Will Steffen et al., The Trajectory of the Anthropocene: The Great Acceleration (2015),
<http://journals.sagepub.com/doi/abs/10.1177/2053019614564785>.

26 ⁷ R. J. Andres et al., A synthesis of carbon dioxide emissions from fossil-fuel combustion, *Biogeosciences*, 9, 1851
(2012), <http://www.biogeosciences.net/9/1845/2012/>.

27 ⁸ R. J. Andres et al., A synthesis of carbon dioxide emissions from fossil-fuel combustion, *Biogeosciences*, 9, 1851
(2012), <http://www.biogeosciences.net/9/1845/2012/>.

28 ⁹ C. Le Quéré et al., Global Carbon Budget 2016, *Earth Syst. Sci. Data* 8, 630 (2016), [http://www.earth-syst-sci-](http://www.earth-syst-sci-data.net/8/605/2016/)
[data.net/8/605/2016/](http://www.earth-syst-sci-data.net/8/605/2016/).

1 Defendants took steps to protect their own assets from these threats through immense internal
2 investment in research, infrastructure improvements, and plans to exploit new opportunities in a
3 warming world.

4 6. Instead of working to reduce the use and combustion of fossil fuel products, lower
5 the rate of greenhouse gas emissions, minimize the damage associated with continued high use
6 and combustion of such products, and ease the transition to a lower carbon economy, Defendants
7 concealed the dangers, sought to undermine public support for greenhouse gas regulation, and
8 engaged in massive campaigns to promote the ever-increasing use of their products at ever greater
9 volumes. Thus, each Defendant's conduct has contributed substantially to the buildup of CO₂ in
10 the environment that drives sea level rise.

11 7. Defendants are directly responsible for 227.6 gigatons of CO₂ emissions between
12 1965 and 2015, representing 20.3% of total emissions of that potent greenhouse gas during that
13 period. Accordingly, Defendants are directly responsible for a substantial portion of committed
14 sea level rise (sea level rise that will occur even in the absence of any future emissions) because
15 of the consumption of their fossil fuel products.

16 8. Extreme flooding events will more than double in frequency on California's Pacific
17 coast by 2050.¹⁰ Flooding and storms will become more frequent and more severe, and average
18 sea level will rise substantially along California's coast, including in Imperial Beach. The City,
19 bordered on three sides by water, is particularly vulnerable to sea level rise, and has already spent
20 significant funds to study and mitigate the effects of global warming. Sea level rise already
21 adversely affects Imperial Beach and jeopardizes the City's wastewater infrastructure, beaches,
22 roads, public transportation, schools, other civil infrastructure and essential public services, and
23 communities.

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26 ¹⁰ Sean Vitousek et al., Doubling of coastal flooding frequency within decades due to sea-level rise, Scientific
27 Reports, (May 18, 2017) ("Only 10 cm of SLR doubles the flooding potential in high-latitude regions with small
28 shape parameters, notably the North American west coast (including the major population centers Vancouver,
Seattle, San Francisco, and Los Angeles), and the European Atlantic coast."); USGS, In Next Decades, Frequency of
Coastal Flooding Will Double Globally (May 18, 2017), <https://www.usgs.gov/news/next-decades-frequency-coastal-flooding-will-double-globally>.