

# RACEGUIDE

## 2021 MICHELIN FORMULA E



**APRIL  
23-25**

**ROUNDS  
5 AND 6**

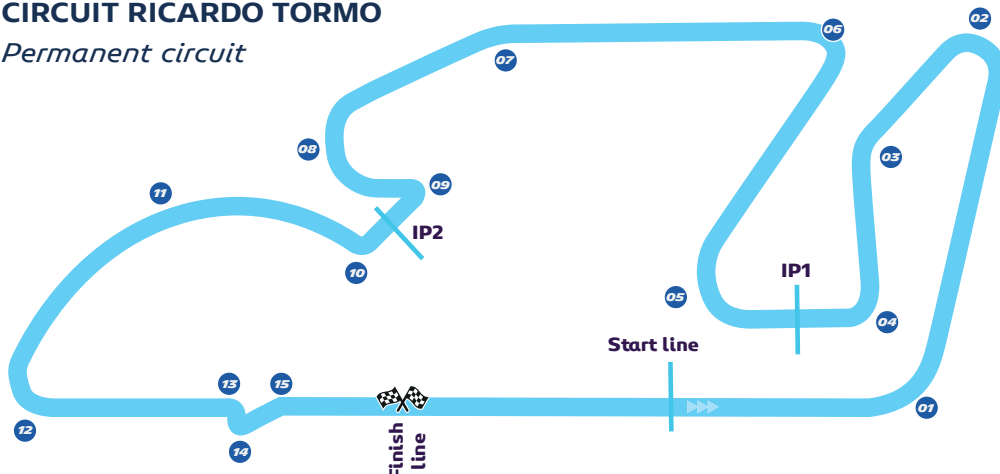
2021 FIA ABB  
FORMULA E WORLD  
CHAMPIONSHIP

**VALENCIA  
SPAIN**



## VALENCIA E-PRIX 2021 1ST RUNNING

**CIRCUIT RICARDO TORMO**  
Permanent circuit



**3.376 KM**

**15  
TURNS**



**ANTICLOCKWISE**

### WEAR

Circuit Ricardo Tormo's surface is more abrasive than that of the street circuits Formula E typically visits. The track is relatively twisty and slow (with the exception of Turn 1) and the MICHELIN Pilot Sport EV will need to be capable of covering a range of possible track and weather conditions. The layout chosen for the e-prix is different to the one used for the championship's official test. A chicane has been added ahead of the pitlane entry.

### TIMETABLE

	ROUND 5	ROUND 6
	<b>APRIL 23</b>	
Shakedown (15 minutes)	5:30pm	
	<b>APRIL 24</b>	<b>APRIL 25</b>
Free Practice 1 (45 minutes)	7:20am	
Free Practice 2 (30 minutes)	9:15am	
Free Practice 3 (45 minutes)		8:00am
Qualifying (in four groups)	11:00am	10:00am
Super Pole (20 minutes)	11:37am	10:37am
E-Prix (45 minutes + 1 lap)	3:04pm	2:04pm

Local time GMT +2

### OFFICIAL PRE-SEASON TEST



Circuit Ricardo Tormo has hosted Formula E's official pre-season tests since Season 4, although the track layout is different for these sessions. The fastest times posted there ahead of the 2021 world championship were:

- 1. MAXIMILIAN GÜNTHER**  
(BMW Andretti Motorsport) 1m11.760s
- 2. SERGIO SETTE-CAMARA**  
(Dragon Penske Autosport) 1m11.796s
- 3. NICO MÜLLER**  
(Dragon Penske Autosport) 1m11.810s



## RENEWABLE ENERGIES AND SUSTAINABLE MOBILITY IN SPAIN

After shutting down its coal-fired power stations in 2020, Spain is targeting 100 percent renewable energy by 2050.

The Spanish energy giant Iberdrola plans to invest €30 billion in renewable energies.



Spain was one of the first nations to turn to wind power. Its 20,000-plus turbines generate 61,000MW, a figure bettered only by Germany in Europe.

The Volkswagen Group is to invest €5 billion in the production of electric vehicles in Spain under the SEAT brand.

Sales of electric vehicles and plug-in hybrids increased by 127 and 264 percent respectively in Spain in November 2020.

In 2020, Spain introduced two aid initiatives (Moves II and Renove) with funds of €100 million and €250 million to buoy the development of clean vehicles and charging stations.

### VALENCIA AND SPAIN TRIVIA

Valencia (population: 800,000) is Spain's third-biggest city.

Founded in 138BC, Valencia is one of Spain's oldest cities.

Prior to 1238, Valencia was successively Roman, Byzantine and Muslim.

The famous rice dish paella is originally from Valencia.

Valencia's City of Arts and Sciences attracts several million visitors yearly.



### GREEN GUIDE

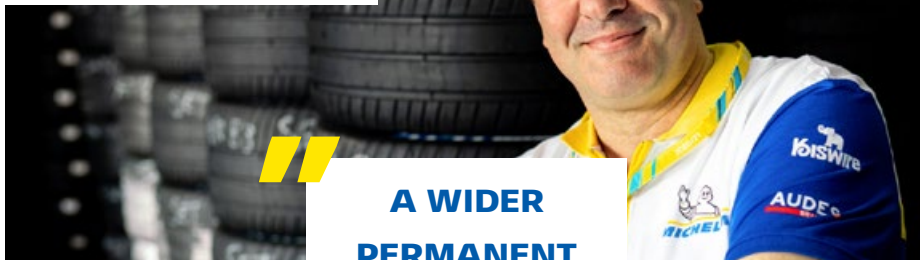
Discover Valencia and its surrounding region with Michelin's Green Guide and Short Stay collections.

## MICHELIN STATISTIC



Since Season 1, 24 different drivers have qualified on pole position for a Formula E e-prix with Michelin. The recent meeting in Rome saw New Zealander Nick Cassidy join the list which Sébastien Buemi tops with 14 poles to his name. Qualifying reveals the performance potential of the MICHELIN Pilot Sport EV over a single lap.

**JÉRÔME MONDAIN,**  
Formula E Manager  
Michelin Motorsport



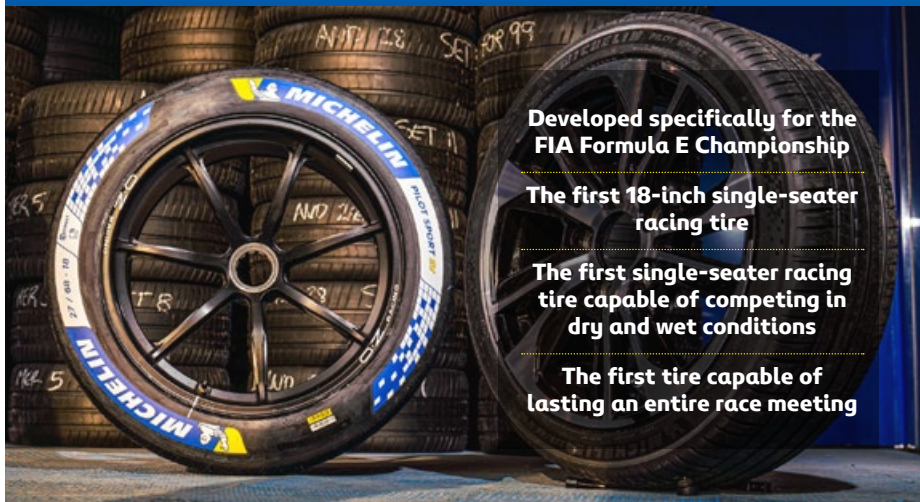
## A WIDER PERMANENT TRACK THAT GIVES MUCH MORE GRIP

We move on from a typical street circuit in Rome, where the track surface was polished and slippery, to a wider permanent track that gives much more grip. We go from one extreme to the other, especially as the weather promises

to be hotter than the mild 17°C we had in Italy. Formula E races rarely visit conventional circuits, exceptions being Valencia and Mexico City, so they always pose an interesting challenge for the MICHELIN Pilot Sport EV.

## THE 2021 VALENCIA E-PRIX AND THE MICHELIN PILOT SPORT EV

### MICHELIN PILOT SPORT EV



Developed specifically for the FIA Formula E Championship

The first 18-inch single-seater racing tire

The first single-seater racing tire capable of competing in dry and wet conditions

The first tire capable of lasting an entire race meeting

**Size (front/rear)** Front: 245/40 R 18 / Rear: 305/40 R 18

**Width (front/rear)** 245mm / 305mm

**Tread width (front/rear)** 240mm / 270mm

**Side wall height (front/rear)** 98mm / 122mm (i.e. 40 percent of tread width)

**Rim diameter** 18 inches

**Weight (front/rear)** Front: 8kg / Rear: 10kg

**Type of tread pattern** Asymmetric, non-directional

**Usage** Circuits, street circuits, asphalt, concrete, wet or dry weather

**Number of tires taken for this race** 288 (24 cars x 12 tires)

**Weight saving per set of four tires** 9kg for 4 tires (season 6 vs season 1)

**Embedded Michelin tire monitoring sensors (TMS)** Automatic transmission of encrypted tire pressure data



# MICHELIN PILOT SPORT EV

**MICHELIN  
PILOT  
SPORT EV**  
THE WINNING  
TIRE  
RANGE

THE REVOLUTIONARY  
**MICHELIN PILOT SPORT EV:**  
LIGHTER AND MORE ENERGY-  
EFFICIENT THAN EVER

## A REVOLUTIONARY RACING TIRE, IN MORE WAYS THAN ONE!

Developed specifically for the world's first all-electric single-seater motor racing championship, the new MICHELIN Pilot Sport EV is an exceptionally versatile tire that was designed by Michelin Motorsport's engineers to cover the entire race day (free practice, qualifying, race), whatever the weather, as required by the technical regulations that govern the series.

**Another exceptional characteristic of the tire is its size.** The MICHELIN Pilot Sport EV was effectively the first ever single-seater tire to feature an interior diameter of 18 inches, a disruptive concept put forward by Michelin Motorsport and approved by the FIA (Fédération Internationale Automobile). The fact that 18-inch wheels

have become a common feature of road cars enables Michelin Motorsport's engineers and chemists **to carry over the lessons they learn on the racetrack to everyday tires, in keeping with the firm's 'track to street' policy.**

The MICHELIN Pilot Sport EV (front: 245/40 R 18 / rear: 305/40 R 18) is tall and narrow in the interests of energy efficiency, which equates to longer range. Its low sidewalls also flex less, resulting in the generation of less heat, which **in turn means reduced energy consumption**, a valuable benefit for Formula E's latest-generation 'Gen2' Spark SRT 05Es.

**The MICHELIN Pilot Sport EV is a connected tire**, too, thanks to an embedded RFID chip which facilitates tracking, from production through to recycling.

## FORMULA E: A HI-TECH LAB FOR MICHELIN

As part of its **VISION plan**, Michelin is targeting the production of tires that incorporate recycled, regenerated and bio-sourced materials by 2050. The extreme conditions encountered in Formula E enable Michelin to incubate new ideas and accelerate the introduction of sustainable materials. The proportion of sustainable materials employed for the textiles that go into the MICHELIN Pilot Sport EV Formula E tire is notably high.

## THE MICHELIN PILOT SPORT EV: THE HEIR

Valencia's Circuit Ricardo Tormo has been used for Formula E's official pre-season test since 2017 and has consequently been the scene of the track debut of different versions of the MICHELIN Pilot Sport EV.

As a founding partner of Formula E, Michelin pioneered a fresh approach to world class motor racing with the development of a single, treaded 18-inch Pilot Sport for the series.

This exceptionally versatile tire is capable of performing in wet and dry conditions alike and has evolved over successive seasons to match the constantly-improving performance of the electric single-seaters that star in the championship. Michelin's current Formula E challenger is 20 percent lighter than the original, but at the same time it is appreciably more efficient, in line with the increasingly higher power output of the cars' power units which today deliver 250kW (335hp).



The third-generation Pilot Sport EV for Formula E benefits from the experience Michelin has gained over six seasons and at some 70 e-prix across the world. A number of the race-proven technologies it packs have been carried over to the MICHELIN Pilot Sport EV for road-going hybrid and electric sports cars.

The latter also benefits from a hard rubber compound for the central part of the tread for optimal grip, plus a more efficient compound for the shoulders to reduce energy consumption, not to mention MaxTouch Construction™ technology which maximizes the size of the contact patch to optimize acceleration, braking and cornering performance.

Available in a choice of 16 sizes for 18- to 22-inch rims, the MICHELIN Pilot Sport EV delivers outstanding grip in wet and dry weather and, in addition to its durability, extends the range of high-performance electric cars by up to 60 kilometers.

PILOT SPORT EV  
FIA FORMULA E



For track use

PILOT SPORT EV



For road use

(high-performance electric vehicles)

PILOT SPORT 4S



For track use

PILOT SPORT 4 SUV



For road and occasional track use

PILOT SPORT 4



For road use



# ENTRY LIST

## 2021 VALENCIA E-PRIX

### AUDI SPORT ABT SCHAEFFLER FORMULA E TEAM

AUDI E-TRON FE07



#### N°11 Lucas DI GRASSI (BRA)

Races: 73  
Victories: 10  
Pole positions: 3

Fasted race laps: 7  
Podiums: 32



CHAMPION  
2016/2017



#### N°33 René RAST (DEU)

Races: 11  
Victory: 0  
Pole position: 0

Fasted race lap: 0  
Podium: 1



### ENVISION VIRGIN RACING

AUDI E-TRON FE07



#### N°37 Nick CASSIDY (NZL)

Races: 4  
Victory: 0  
Pole position: 1

Fasted race lap: 0  
Podiums: 0

ROOKIE



#### N°04 Robin FRIJNS (NED)

Races: 49  
Victories: 2  
Pole position: 1

Fasted race lap: 0  
Podiums: 8



### BMW I ANDRETTI MOTORSPORT

BMW iFE.21



#### N°27 Jake DENNIS (GBR)

Races: 4  
Victory: 0  
Pole positions: 0

Fasted race lap: 0  
Podium: 0

ROOKIE



#### N°28 Max GÜNTHER (DEU)

Races: 25  
Victories: 2  
Pole position: 0

Fasted race lap: 0  
Podiums: 3



### DRAGON / PENSKE AUTOSPORT

PENSKE EV-4



#### N°07 Segio SETTE CAMARA (BRA)

Races: 10  
Victory: 0  
Pole position: 0

Fasted race lap: 0  
Podium: 0



#### N°06 Nico MULLER (CHE)

Races: 14  
Victory: 0  
Pole position: 0

Fasted race lap: 1  
Podium: 0



### DS TECHEETAH

DS E-TENSE FE20



#### N°25 Jean-Eric VERGNE (FRA)

Races: 71  
Victories: 10  
Pole positions: 11

Fasted race laps: 4  
Podiums: 24



CHAMPION  
2017/2018  
et 2018/2019



#### N°13 Antonio Felix DA COSTA (PRT)

Races: 69  
Victories: 5  
Pole positions: 4

Fasted race laps: 3  
Podiums: 12



CHAMPION  
2019/2020



### MAHINDRA RACING

MAHINDRA M7ELECTRO



#### N°29 Alexander SIMS (GBR)

Races: 28  
Victory: 1  
Pole positions: 3

Fasted race lap: 1  
Podiums: 3



#### N°94 Alex LYNN (GBR)

Races: 31  
Victory: 0  
Pole position: 1

Fasted race lap: 0  
Podium: 0



# ENTRY LIST

## 2021 VALENCIA E-PRIX

### MERCEDES-BENZ EQ FORMULA E TEAM

#### MERCEDES-BENZ EQ SILVER ARROW 02



#### N°5 Stoffel VANDOORNE (BEL)

Races: 28  
Victories: 2  
Pole positions: 3

Fasted race laps: 2  
Podiums: 5



#### N°17 Nyck DE VRIES (NED)

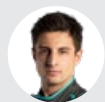
Races: 15  
Victory: 1  
Pole position: 1

Fasted race laps: 2  
Podiums: 2



### JAGUAR RACING

#### JAGUAR I-TYPE V



#### N°20 Mitch EVANS (NZL)

Races: 52  
Victories: 2  
Pole positions: 2

Fasted race laps: 3  
Podiums: 8



#### N°10 Sam BIRD (GBR)

Races: 73  
Victories: 10  
Pole positions: 5

Fasted race laps: 6  
Podiums: 21



### NIO 333 FE TEAM

#### NIO 333 001



#### N°8 Oliver TURVEY (GBR)

Races: 62  
Victory: 0  
Pole position: 1

Fasted race lap: 0  
Podium: 1



#### N°88 Tom Blomqvist (GBR)

Races: 12  
Victory: 0  
Pole position: 0

Fasted race lap: 0  
Podium: 0



### TAG HEUER PORSCHE FORMULA E TEAM

#### PORSCHE 99X ELECTRIC



#### N°36 André LOTTERER (DEU)

Races: 40  
Victory: 0  
Pole positions: 2

Fasted race laps: 3  
Podiums: 6



#### N°99 Pascal WEHRLEIN (DEU)

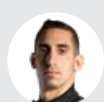
Races: 21  
Victory: 0  
Pole position: 1

Fasted race laps: 3  
Podiums: 2



### NISSAN E.DAMS

#### NISSAN IMO2



#### N°23 Sébastien BUEMI (CHE)

Races: 71  
Victories: 13  
Pole positions: 14

Fasted race laps: 7  
Podiums: 29

**CHAMPION**  
2015/2016



#### N°22 Oliver ROWLAND (GBR)

Races: 29  
Victory: 1  
Pole positions: 4

Fasted race lap: 1  
Podiums: 3



### ROKIT VENTURI RACING

#### Mercedes-Benz EQ SILVER ARROW 02



#### N°48 Edoardo MORTARA (CHE)

Races: 36  
Victory: 1  
Pole position: 0

Fasted race lap: 0  
Podiums: 4



ROOKIE

#### N°71 Norman NATO (FRA)

Races: 4  
Victory: 0  
Pole position: 0

Fasted race lap: 0  
Podium: 0



# FIA FORMULA E

## DRIVERS' STANDINGS

		 SAU 26/02	 SAU 27/02	 ITA 10/04	 ITA 11/04	 ESP 24/04	 ESP 25/04	 IDN 08/05	 MAR 22/05	 CHL 05/06	 CHL 06/06	TOTAL
<b>1</b>	<b>SAM BIRD</b>		0	25	18	0						<b>43</b>
<b>2</b>	<b>MITCH EVANS</b>		15	0	16	8						<b>39</b>
<b>3</b>	<b>ROBIN FRIJNS</b>		0	22	12	0						<b>34</b>
<b>4</b>	<b>STOFFEL VANDOORNE</b>		4	0	3	26						<b>33</b>
<b>5</b>	<b>NYCK DE VRIES</b>		29	3	0	0						<b>32</b>
<b>6</b>	<b>PASCAL WEHRLEIN</b>		10	1	6	15						<b>32</b>
<b>7</b>	<b>EDOARDO MORTARA</b>		18	0	0	12						<b>30</b>
<b>8</b>	<b>JEAN-ÉRIC VERGNE</b>		0	0	25	0						<b>25</b>
<b>9</b>	<b>ALEXANDER SIMS</b>		6	0	0	18						<b>24</b>
<b>10</b>	<b>ANTÓNIO FÉLIX DA COSTA</b>		0	15	0	6						<b>21</b>
<b>11</b>	<b>RENÉ RAST</b>		13	0	8	0						<b>21</b>
<b>12</b>	<b>OLIVER ROWLAND</b>		8	6	1	0						<b>15</b>
<b>13</b>	<b>SÉRGIO SETTE CÂMARA</b>		0	12	0	0						<b>12</b>
<b>14</b>	<b>NICO MÜLLER</b>		0	10	0	2						<b>12</b>
<b>15</b>	<b>MAXIMILIAN GÜNTHER</b>		0	0	2	10						<b>12</b>
<b>16</b>	<b>SÉBASTIEN BUEMI</b>		0	0	10	1						<b>11</b>
<b>17</b>	<b>OLIVER TURVEY</b>		1	8	0	0						<b>9</b>
<b>18</b>	<b>LUCAS DI GRASSI</b>		2	4	0	0						<b>6</b>
<b>19</b>	<b>TOM BLOMQVIST</b>		0	0	1	4						<b>5</b>
<b>20</b>	<b>ALEX LYNN</b>		0	0	4	0						<b>4</b>
<b>21</b>	<b>NICK CASSIDY</b>		0	0	0	3						<b>3</b>
<b>22</b>	<b>NORMAN NATO</b>		0	0	0	1						<b>1</b>
<b>23</b>	<b>ANDRÉ LOTTERER</b>		0	0	0	0						<b>0</b>
<b>24</b>	<b>JAKE DENNIS</b>		0	0	0	0						<b>0</b>

# REGULATIONS

## 2021 ABB FIA FORMULA E WORLD CHAMPIONSHIP

### CARS (SINGLE-SEATERS)

- Spark STR-05e / chassis: Dallara / battery: McLaren Applied Technologies
- **Maximum length:** 5,200mm
- **Maximum width:** 1,800mm
- **Maximum height:** 1,250mm
- **Minimum weight:** 900kg, including driver and battery and/or capacitor (maximum: 280kg)
- Maximum power, electric powertrain: 250kW (335hp) for free practice and qualifying, 200kW (270hp) during races.
- Gearbox: six speeds maximum
- Only 1 MGU may be used
- Allocation per race number: 2 electric motors, 2 gearboxes, 2 inverters and 1 battery pack for the season



### TIRES

- A single type of tire (pattern and construction)
- No mid-race tire changes
- Allocation of 1.5 sets (3 front + 3 rear) of new tires per driver for single race and 2 sets (4 front + 4 rear) per driver for double headers.
- All tires are returned to Michelin after every event
- In the case of a puncture during a practice session, the use of a marked tire is authorised (identified by FIA)
- Can be inflated using air only
- Minimum tire pressures are checked before qualifying and before races
- In the case of a 'Wet Track', tire pressures may be adjusted in parc ferme
- Tires must remain visible in the team garages at all times
- Tires are identified by RFID chips
- Tire warmers not authorised

### EVENT FORMATS

- A **Shakedown** session of a maximum duration of 15 minutes + three laps may be organised the day before the race. Power is restricted to 110kW. A maximum of six laps per car.
- **Practice:** Two practice sessions (45 and 30 minutes) in the course of the morning of Race Day. Maximum power: 250kW.
- **Qualifying:** The drivers are divided into four groups of six cars as a function of their championship positions (or of the previous championship order in the case of the season's first race). Each driver has up to two flying laps (only one running at maximum power) to post a qualifying time. The six fastest drivers go on to take part in the Super Pole shootout. Maximum power: 250kW.
- **Super Pole:** Start order is based on the times posted in qualifying, with the 'slowest driver' to lap first, etc. One flying lap only.
- **Grid:** The six places at the front of the grid are reserved for the drivers who take part in the Super Pole session.
- **Race:** Standing start. Maximum duration: 45 minutes + 1 lap. Use of two power outputs mandatory: Normal Mode (200kW / regeneration: 250kW) and Attack Mode (235kW / regeneration: 250kW).
- **Attack Mode:** Power: 235kW (compared with 225kW in 2018/2019). The number and duration of Attack Mode activations is specific to each race and are notified at least one hour before the start. The cockpit halo lights up when a car is in Attack Mode.
- **FanBoost:** A temporary 100kJ power boost (minimum: 240kW/maximum: 250kW) for five drivers chosen by a fan vote. To be activated once, but not before the 22nd minute of the race.

### POINTS-SCORING SYSTEM

**Race result:** 1<sup>st</sup>, 25 points • 2<sup>nd</sup>, 18 points  
3<sup>rd</sup>, 15 points • 4<sup>th</sup>, 12 points • 5<sup>th</sup>, 10 points  
6<sup>th</sup>, 8 points • 7<sup>th</sup>, 6 points • 8<sup>th</sup>, 4 points  
9<sup>th</sup>, 2 points • 10<sup>th</sup>, 1 point.

**Pole Position:** 3 points.

**Fastest drivers in the qualifying groups:**  
1 point

**Fastest race lap:** 1 point  
(if driver classified inside the top 10).

