

# RACEGUIDE

2021 MICHELIN FORMULA E



**JULY 10-11**

**ROUNDS  
10 AND 11**

**2020/21 ABB FIA  
FORMULA E WORLD  
CHAMPIONSHIP**

**NEW YORK CITY  
(USA)**

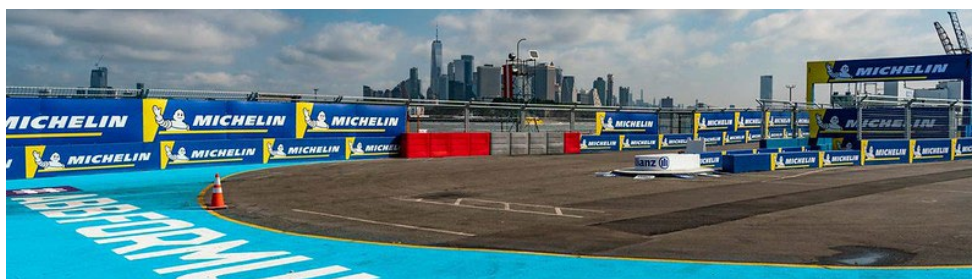
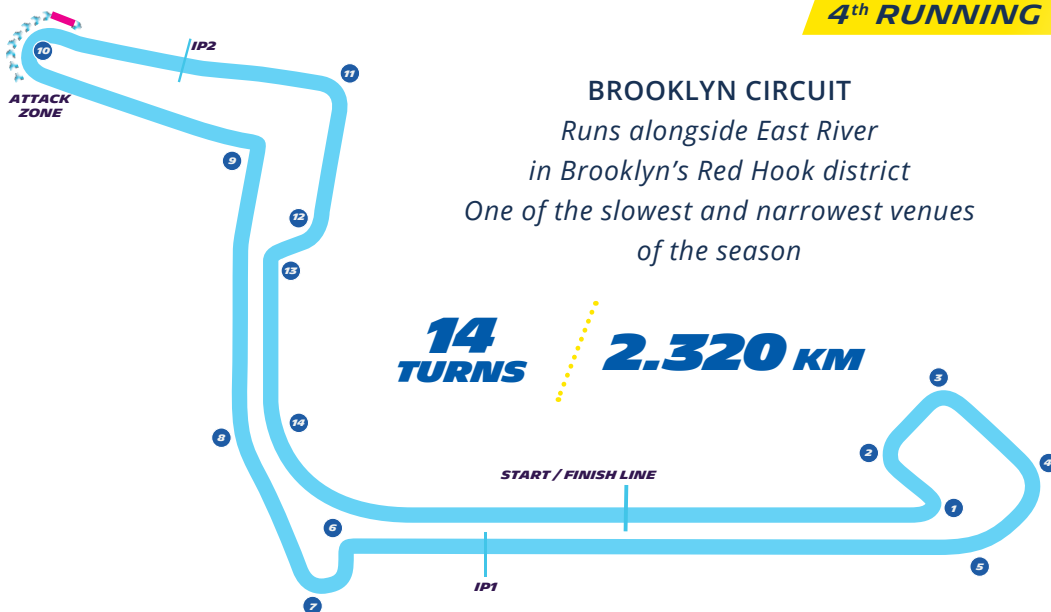


### TRACTION

The traction provided by the MICHELIN Pilot Sport EV promises to play a fundamental role given the frequent need for hard acceleration out of the Brooklyn circuit's high proportion of tight turns and hairpins. The combination of hot weather and the instant torque delivered by the Formula E cars' all-electric motors will put tires to a punishing test, especially towards the end of the race.

## 2021 NEW YORK CITY E-PRIX

**4<sup>th</sup> RUNNING**



### TIMETABLE

	ROUND 10	ROUND 11
	JULY 9	
Shakedown (15 minutes)	5:30pm	
	JULY 10	JULY 11
Free Practice 1 (45 minutes)	8:00am	
Free Practice 2 (30 minutes)	10:15am	
Free Practice 3 (45 minutes)		7:15am
Qualifying (in four groups)	12:30pm	9:30am
Super Pole (20 minutes)	1:37pm	10:07am
E-Prix (45 minutes + 1 lap)	4:34pm	1:34pm

Local time

### THE 2019 E-PRIX

**WINNERS**



**RACE 1**

**Sébastien Buemi**  
(Nissan e.dams), 36 laps

**RACE 2**

**Robin Frijns**  
(Envision Virgin Racing), 36 laps

**POLE-POSITIONS  
RACES 1 AND 2**

**Sébastien Buemi**  
(Nissan e.dams),  
1min10s188

**Alexander Sims**  
(BMW | Andretti Motorsport),  
1min09s617

Jean-Eric Vergne became Formula E's first two-time champion  
DS Techeetah secured the Teams title  
The MICHELIN Pilot Sport EV provided further evidence of its consistency as the track temperature soared to 40°C



## RENEWABLE ENERGIES AND SUSTAINABLE MOBILITY IN NEW YORK

The first New York taxi company Electric Carriage introduced a fleet of 12 electric vehicles in 1897



New York State intends to build 20 renewable-energy projects this year

New York City is targeting carbon neutrality by 2050 and zero-emissions energy by 2040

The state of New York is looking to generate 9GW thanks to an off-shore wind farm by 2035

New York recently announced a 250 million-dollar scheme (Evolve NY) to expand its electric-vehicle infrastructure

New York State plans to make the sale of zero-emissions vehicles mandatory by 2035

Elon Musk recently drove through New York in a Tesla Cybertruck

### MICHELIN GREEN GUIDE

Michelin has published two guides for the Big Apple – the Green Guide New York and the Weekend Green Guide New York – to make sure visitors make the most of its many attractions, from Time Square and Central Park to the Statue of Liberty and Brooklyn Bridge, etc.



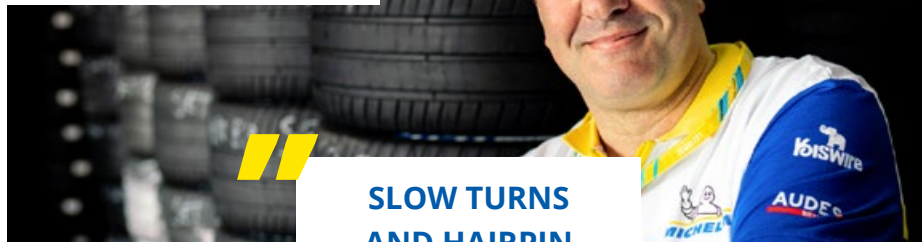
### MICHELIN STATISTIC



The New York City E-Prix has always been a double-header weekend. The six Brooklyn races contested to date have been won by five different drivers, including three Formula E champions.



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



## SLOW TURNS AND HAIRPIN BENDS WHICH WILL REQUIRE STRONG TRACTION PERFORMANCE

Brooklyn's chief feature is its high number of slow turns and hairpin bends which will require strong traction performance from the cars'

MICHELIN Pilot Sport EV tires. The track surface tends to be dusty initially and, even though the racing line gradually cleans,

overtaking can be delicate due to the difference in grip levels off-line. The New York City E-Prix has always been a double-header meeting with two races, but this year's tire allowance per car has been halved from 16 to eight compared with the 2019 visit.

## THE 2021 NEW YORK CITY 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
Sidewall 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	192 (24 cars x 8 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.

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

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

As part of its **VISION plan**, Michelin is targeting the production of tires that incorporate 100% 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

The MICHELIN Pilot Sport EV returns to Big Apple which is hosting Formula E action for the fourth time this year in Brooklyn's Red Hook district. The last two visits to the USA city saw Jean-Eric Vergne secure the crown at the season's finale.

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.

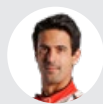


# ENTRY LIST

## 2021 NEW YORK CITY E-PRIX

### AUDI SPORT ABT SCHAEFFLER FORMULA E TEAM

AUDI E-TRON FE07



#### N°11 Lucas DI GRASSI (BRA)

Races: 78  
Victories: 11  
Pole positions: 3

Fasted race laps: 7  
Podiums: 33



CHAMPION  
2016/2017



#### N°33 René RAST (DEU)

Races: 16  
Victory: 0  
Pole position: 0

Fasted race lap: 1  
Podiums: 2



### ENVISION VIRGIN RACING AUDI E-TRON FE07

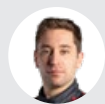


#### N°37 Nick CASSIDY (NZL)

Races: 9  
Victory: 0  
Pole position: 1

Fasted race lap: 0  
Podium: 1

ROOKIE



#### N°4 Robin FRIJNS (NED)

Races: 54  
Victories: 2  
Pole position: 1

Fasted race lap: 1  
Podiums: 9



### BMW I ANDRETTI MOTORSPORT BMW iFE.21



#### N°27 Jake DENNIS (GBR)

Races: 9  
Victory: 1  
Pole position: 1

Fasted race lap: 0  
Podium: 1

ROOKIE



#### N°28 Max GÜNTHER (DEU)

Races: 30  
Victories: 2  
Pole position: 0

Fasted race lap: 0  
Podiums: 3



### DRAGON / PENSKE AUTOSPORT PENSKE EV-4



#### N°7 Sergio SETTE CAMARA (BRA)

Races: 15  
Victory: 0  
Pole position: 0

Fasted race lap: 0  
Podium: 0



#### N°6 Joël ERIKSSON (SWE)

Races: 2  
Victory: 0  
Pole position: 0

Fasted race lap: 0  
Podium: 0

ROOKIE



### DS TECHEETAH DS E-TENSE FE20



#### N°25 Jean-Eric VERGNE (FRA)

Races: 76  
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: 74  
Victories: 6  
Pole positions: 6

Fasted race laps: 3  
Podiums: 13



CHAMPION  
2019/2020



### MAHINDRA RACING MAHINDRA M7ELECTRO



#### N°29 Alexander SIMS (GBR)

Races: 33  
Victory: 1  
Pole positions: 3

Fasted race laps: 2  
Podiums: 3



#### N°94 Alex LYNN (GBR)

Races: 36  
Victory: 0  
Pole position: 1

Fasted race lap: 0  
Podium: 1



# ENTRY LIST

## 2021 NEW YORK CITY E-PRIX

### MERCEDES-BENZ EQ FORMULA E TEAM

#### MERCEDES-BENZ EQ SILVER ARROW 02



#### N°5 Stoffel VANDOORNE (BEL)

Races: 33 Fasted race laps: 3  
 Victories: 2 Podiums: 6  
 Pole positions: 3



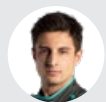
#### N°17 Nyck DE VRIES (NED)

Races: 20 Fasted race laps: 2  
 Victories: 2 Podiums: 3  
 Pole position: 1



### JAGUAR RACING

#### JAGUAR I-TYPE V



#### N°20 Mitch EVANS (NZL)

Races: 57 Fasted race laps: 3  
 Victories: 2 Podiums: 9  
 Pole positions: 2



#### N°10 Sam BIRD (GBR)

Races: 78 Fasted race laps: 6  
 Victories: 10 Podiums: 11  
 Pole positions: 5



### NIO 333 FE TEAM

#### NIO 333 001



#### N°8 Oliver TURVEY (GBR)

Races: 67 Fasted race lap: 0  
 Victory: 0 Podium: 1  
 Pole position: 1



#### N°88 Tom Blomqvist (GBR)

Races: 17 Fasted race lap: 0  
 Victory: 0 Podium: 0  
 Pole position: 0



### TAG HEUER PORSCHE FORMULA E TEAM

#### PORSCHE 99X ELECTRIC



#### N°36 André LOTTERER (DEU)

Races: 45 Fasted race laps: 3  
 Victory: 0 Podiums: 7  
 Pole positions: 2



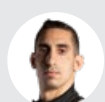
#### N°99 Pascal WEHRLEIN (DEU)

Races: 26 Fasted race laps: 3  
 Victory: 0 Podiums: 2  
 Pole positions: 2



### NISSAN E.DAMS

#### NISSAN IMO2



#### N°23 Sébastien BUEMI (CHE)

Races: 76 Fasted race laps: 7  
 Victories: 13 Podiums: 29  
 Pole positions: 14



#### N°22 Oliver ROWLAND (GBR)

Races: 34 Fasted race laps: 2  
 Victory: 1 Podiums: 4  
 Pole positions: 5



### ROKIT VENTURI RACING

#### Mercedes-Benz EQ SILVER ARROW 02



#### N°48 Edoardo MORTARA (CHE)

Races: 41 Fasted race lap: 0  
 Victories: 2 Podiums: 6  
 Pole position: 0



ROOKIE

#### N°71 Norman NATO (FRA)

Races: 9 Fasted race lap: 0  
 Victory: 0 Podium: 0  
 Pole position: 0





# FIA FORMULA E

## DRIVERS' STANDINGS

		R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	TOTAL
		 SAU	 SAU	 ITA	 ITA	 ESP	 ESP	 MCO	 MEX	 MEX	 USA	 USA	 GB	 GB	 DEU	 DEU	
		26/02	27/02	10/04	11/04	24/04	25/04	08/05	19/06	20/06	10/07	11/07	24/07	25/07	14/08	15/08	
1	<b>EDOARDO MORTARA</b>		18	0	0	12	0	2	0	15	25						72
2	<b>ROBIN FRIJNS</b>		0	22	12	0	9	0	19	0	0						62
3	<b>ANTÓNIO FÉLIX DA COSTA</b>		0	15	0	6	3	0	28	8	0						60
4	<b>RENÉ RAST</b>		13	0	8	0	10	8	0	19	2						60
5	<b>MITCH EVANS</b>		15	0	16	8	0	0	15	4	2						60
6	<b>NYCK DE VRIES</b>		29	3	0	0	25	0	0	2	0						59
7	<b>STOFFEL VANDORNE</b>		4	0	3	26	15	0	0	6	0						54
8	<b>JAKE DENNIS</b>		0	0	0	0	4	29	0	10	11						54
9	<b>OLIVER ROWLAND</b>		8	6	1	0	0	12	8	0	18						53
10	<b>JEAN-ÉRIC VERGNE</b>		0	0	25	0	2	6	13	0	4						50
11	<b>SAM BIRD</b>		0	25	18	0	0	0	6	0	0						49
12	<b>PASCAL WEHRLEIN</b>		10	1	6	15	0	0	0	4	12						48
13	<b>LUCAS DI GRASSI</b>		2	4	0	0	6	1	1	25	0						39
14	<b>NICK CASSIDY</b>		0	0	0	3	12	0	4	0	18						37
15	<b>ALEXANDER SIMS</b>		6	0	0	18	0	0	0	12	0						36
16	<b>ALEX LYNN</b>		0	0	4	0	1	16	2	1	8						32
17	<b>NICO MUELLER</b>		0	10	0	2	18	0	0	0	0						30
18	<b>MAXIMILIAN GUENTHER</b>		0	0	2	10	0	0	10	0	6						28
19	<b>ANDRÉ LOTTERER</b>		18	0	0	0	0	0	18	0	0						18
20	<b>OLIVER TURVEY</b>		1	8	0	0	0	4	0	0	0						13
21	<b>SÉRGIO SETTE CÂMARA</b>		0	12	0	0	0	0	0	0	0						12
22	<b>SÉBASTIEN BUEMI</b>		0	0	10	1	0	0	0	0	0						11
23	<b>NORMAN NATO</b>		0	0	0	1	0	10	0	0	0						10
24	<b>TOM BLOMQVIST</b>		0	0	1	4	0	0	0	0	0						5
25	<b>JOEL ERIKSSON</b>		0	0	0	0	0	0	0	0	0						0

# 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 22<sup>nd</sup> 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).

