

In the light of transition

Looking back on 2019 I can say that LightRec has again strengthened its position for the future. Thanks to legislation that enables us to keep putting our mission into practice. Thanks to a new deal with the Dutch metal recycling branch federation, MRF, which allows us to register more luminaires that end up in scrap metal recycling. Thanks to new campaigns, which have heightened consumer awareness of luminaire collection as the new normal. And thanks to National Recycle Week, which has put the spotlight, nation-wide, on the importance of recycling. All of this together means that we are confident in the face of tomorrow's challenges.

Maurice Spee, Chairman of the Board of LightRec

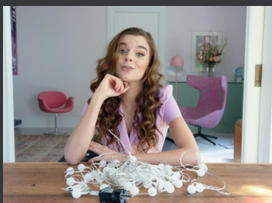
Maurice Spee

Highlights 2019



Collection increased again in 2019

The year 2019 saw a further increase in the collection of lamps and luminaires (+11% in total). The growth rate for luminaire collection was 14% and for lamps it was 4%, a notable increase versus prior year. Collection rates were up especially for fluorescent tubes and luminaires from commercial sectors (construction, installation and demolition). Measured in kilograms, the collection of LED lamps showed almost a tripling in 2019.



Special events and campaigns

In 2019, LightRec was one of the initiators of the first National Recycle Week in the Netherlands. This event was the first to specifically target awareness of the 'invisible mountain' of e-waste that has been accumulated by households in the Netherlands. In addition, Wecycle on behalf of LightRec launched a major influencer campaign to increase awareness especially in the younger generation.



MRF deal: metal recyclers pull their weight

In September 2019, LightRec and the members of scrap metal branch organisation MRF (Metaal Recycling Federatie) entered into an agreement to promote e-waste collection. Under this agreement, MRF members will for the duration of one year register separately all discarded luminaires. Also, they will process these luminaires (or have them processed) in accordance with regulations. They will be compensated for the extra administration effort.



Extension of legislation regarding luminaires results in significant increase POM

Since 2018, luminaires in ordinary households have been included in the legislation regarding collection and recycling. This has more than doubled the number of appliances put on the market (POM). It will be some time, however, before substantial volumes of these luminaires will become available for recycling. The logical consequence of this is that the collection target of 65% is also still a long way away.

Challenges and ambitions for 2020

Collection of luminaires poses the greatest challenge

Collection rates of discarded fluorescent tubes, energy-saving lamps and other conventional lamps remained stable (approximately 80%). However, sales of these types of lamps (POM) are showing a rapid decrease, while sales of LED lighting are on the rise. Due to their longevity, LED lamps are as yet discarded only in very small numbers. In order to reach the legal objective of collecting 65% of what is put on the market, our focus in the next few years will have to be on collecting luminaires. To this end, LightRec is working together with industries such as metal recycling, construction and demolition.

Special focus on collecting household luminaires

LightRec is already realising excellent results in the collection of fluorescent tubes, energy-saving lamps and other conventional lamps. Luminaires from the commercial sector are also finding their way into the collection system. The collection of household luminaires is an entirely new category, in which we are starting from scratch. It will take a major communication effort to ensure consumer awareness of the need to collect these luminaires. Our investment policy is aimed at making this possible.

Together for an (even) better collection result.

Now that collection targets are increasingly challenging, we need to consolidate the good performance levels that we have been able to achieve. LightRec aims to concentrate on the demolition and installation sectors especially, where at present a large percentage of discarded luminaires escapes registration. This will require continuous investments in communication, education and collaboration. An example of such a collaboration is our recent initiative to participate in OPEN, a new foundation in which manufacturers have come together to take their responsibility regarding e-waste in the Netherlands (the organisation's Dutch name in full: Organisatie Producentenverantwoordelijkheid E-waste Nederland). In the next few years, OPEN will act on behalf of manufacturers with the aim to effectively and efficiently achieve the legal collection objective. The costs of OPEN's activities will be shared by manufacturers on a pro rata basis. In the future, OPEN will oversee the collection of luminaires, while LightRec will remain responsible for the collection of lamps until 2023. LightRec's involvement with OPEN includes direct representation in the foundation's board.

Preparing for LED market maturity

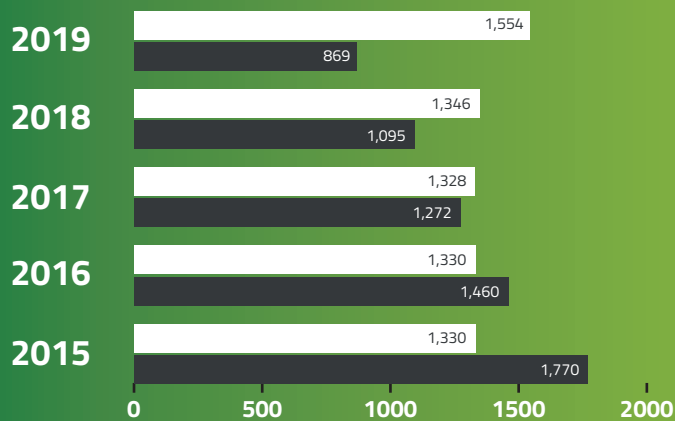
While we await the first generations of LED lighting to reach the end of a long service life and be discarded, we expect to see an apparent dip in collection rates. On the upside, this will give LightRec time to prepare for the collection of recycling of LED products, which will require new technologies and processes and a new cycle of awareness-raising among consumers. Our current success in the collection of conventional lighting products didn't just happen spontaneously. It was the result of concerted efforts, extensive collaboration in the chain and continuous investments. The current success rate raises the bar for the future collection of LED products and the tools that will help make this possible.

Collected lamps and luminaires

2015-2019 (in tonnes)

● Collected ● Put on market

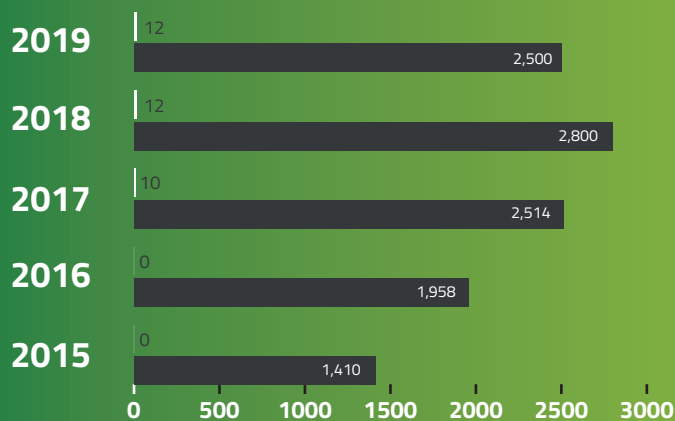
Fluorescent tubes



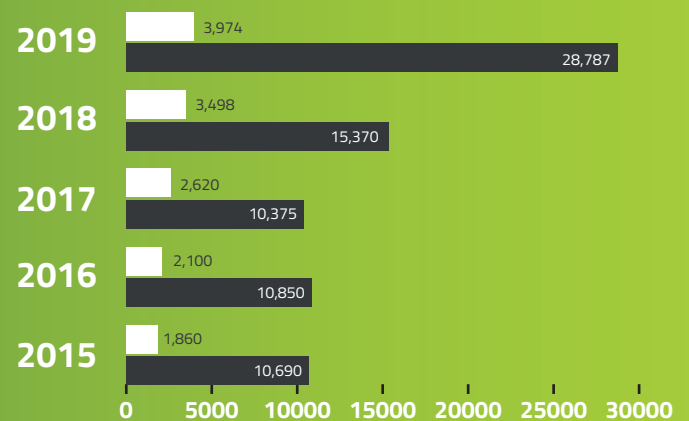
Energy-saving and other lamps



LED



Luminaires*



* Before August 2018: only professional luminaires (construction and demolition industry).
From August 2018: also very large volumes of consumer luminaires (legally required since August 2018).



Costs

Costs for collection, transport and recycling
Other costs (including Action plan Lightrec)
Total

Budget 2020	Actual 2019	Actual 2018	Actual 2017
(€)	(€)	(€)	(€)
3,075,600	2,873,602	2,549,272	2,305,423
924,000	68,016	59,525	90,033
3,999,600	2,941,618	2,608,797	2,395,456



Collected volume

Fluorescent tubes
Energy saving and other lamps
LED lamps
Luminaires
Total

Budget 2020	Actual 2019	Actual 2018	Actual 2017
(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
1,560	1,555	1,116	1,124
285	253	636	649
55	31	0	0
4,240	3,974	3,498	2,620
6,140	5,813	5,250	4,393



Marketing expenses and publicity campaigns

Wecycle publicity campaigns
Communication
Total

Budget 2020	Actual 2019	Actual 2018	Actual 2017
(€)	(€)	(€)	(€)
130,800	97,704	192,912	119,131
175,000	166,217	195,305	173,318
305,800	263,921	388,217	292,449



Consumer and professional campaigns

Installer / professional campaigns
Retail / consumer campaigns
Total

Budget 2020	Actual 2019	Actual 2018	Actual 2017
(€)	(€)	(€)	(€)
65,000	492,574	443,399	566,649
1,505,000	1,316,979	1,136,793	549,816
2,160,000	1,809,553	1,580,192	1,116,465