

# Rolling Blackouts and Changes to Everyday Life in Suburban Tokyo: Survey of Kunitachi's Local Shopping Streets

Sunmee KIM

## OUTLINE OF THE RESEARCH

**Date:** November–December 2011

**Field:** Kunitachi (国立), Tokyo

**Researchers:** Jiyoung KIM, Sunmee KIM, Takashi MACHIMURA, Saki UCHIUMI, and Anna WATANABE

**Purpose:** To capture unexpected impacts and changes due to the Great East Japan Earthquake and Fukushima nuclear accident, we conducted a questionnaire survey in three shopping districts in Kunitachi, Tokyo. This study intends to investigate the actual conditions of rolling blackouts and describe the atmosphere of local neighborhoods after the disaster through an analysis of survey results.

This study focused on the following topics:

- Various reactions to rolling blackouts
- Damages and changes resulting from the Fukushima nuclear accident
- “Mood of self-restraint” (Zishuku) and changes in retail sales

## RESEARCH BACKGROUND: DISASTER AND START OF ROLLING BLACKOUTS

Although the Fukushima Daiichi nuclear accident occur 200-km away from Tokyo, it had various impacts on the metropolitan area. Power shortages and blackouts were one of the most immediate and urgent problems to follow the disaster.

On March 14, just three days after the Great East Japan Earthquake, Tokyo Electric Power Company, Inc., (TEPCO 東京電力) announced implementation of rolling blackouts in East Japan due to expected power shortages.<sup>1</sup>

According to TEPCO's plans, approximately three hours of blackout were planned for a wide Tokyo metropolitan area, including Kanagawa, Shizuoka, Yamanashi, Chiba, Ibaraki, Saitama, Tochigi, and Gunma prefectures. However, because the amount of electricity consumption was not completely predictable, the rolling blackout plan was only a notification of what may happen. In fact, as it turned out, the plan was not always implemented as previously scheduled.

To alleviate power shortage, various actors offered temporary solutions. Manufacturing companies temporarily organized weekday holidays as a replacement for the usual weekend holidays.<sup>2</sup> Railway timetables were adjusted to reduce the daytime service.<sup>3</sup> Department stores and retail chains reduced their store lighting and business hours.<sup>4</sup> Signs reading “blackouts now” and “saving electricity” could be observed everywhere in Tokyo. Thus, in a quiet but highly noticeable way, rolling blackouts brought changes to the everyday life in Tokyo and people soon began to adapt to these changes.

---

Sunmee KIM, Doctoral Student, Graduate School of Social Sciences, Hitotsubashi University

# Rolling Blackouts and Changes to Everyday Life in Suburban Tokyo: Survey of Kunitachi's Local Shopping Streets

Sunmee KIM

## RESEARCH ON KUNITACHI'S LOCAL SHOPPING STREETS

Our research group is based in Kunitachi, which is located to the west of the Tokyo Metropolitan area. The city is a residential area of Tokyo's upper-middle class and home to universities and beautiful greenery. A number of local stores have created a unique street scene at the JR Kunitachi station. The city's current residential population is 74,612, with 35,416 of households (as of August 2012).<sup>5</sup>

The first rolling blackout in Kunitachi occurred on March 16. At the university, a "Weekly Electricity Forecast" board was placed in front of the campus entrance, and the whole university was quiet and rather dim, even during the day. Near JR Kunitachi station, people and cars moved slowly as traffic lights were switched off, and they had to follow the instructions of a police officer instead. These scenes indicate that the daily life of people in every corner of Kunitachi was considerably dependent on infrastructures such as electricity.



Photo 1 Shopping Street with traffic lights switched off (3/22/2011)  
Note: Photograph by Takashi Machimura.

To collect data on changes, we conducted a questionnaire survey from mid-November through December 2011 at three major local shopping streets around the south side of JR Kunitachi station: Fujimi-Dori, Asahi-Dori, and Daigaku-Dori. It was part of the "Methods of Social Survey" class. Each student made 3 or 4 questions that reflect their interests about the local shopping street and the change after disaster, and Takashi Machimura (the charge of the "Methods of Social Survey" class) assembled them into one questionnaire. Store owners or managers answered with face-to-face interviews. The target group included approximately 156 stores, and 86 of them responded (55.1% response rate).

Eighteen questionnaire items were divided into the following seven parts: The impact of rolling blackouts, Support for victims, Changes after the nuclear accident, "Mood of self-restraint" and changes in sales, save electricity campaigns, the future of local shopping streets, and Relationship between university and local shopping streets. Because this study addresses changes and impacts on local shopping streets due to the disaster, we will mainly use questions on rolling blackout and changes after the disaster.

## RESEARCH FINDINGS: CHANGES IN EVERYDAY LIFE IN SUBURBAN TOKYO

### 1) Various Reactions to Rolling Blackouts

In TEPCO's original rolling blackout plans, Kunitachi belonged to Groups 2, 3, and 4. A wide area of the city, including our research area, belonged to Group 3 (for more information, see the appendix). However, the time of blackouts and temporary solutions to them varied even within each group. According to survey results, 75 stores (87.2%) had experienced blackouts, but the number of blackouts differed among stores

# Rolling Blackouts and Changes to Everyday Life in Suburban Tokyo: Survey of Kunitachi's Local Shopping Streets

Sunmee KIM

(see figure1). This result reveals that not all of blackouts were implemented as planned; even in the same group, there was a considerable difference in the number of actual blackouts.

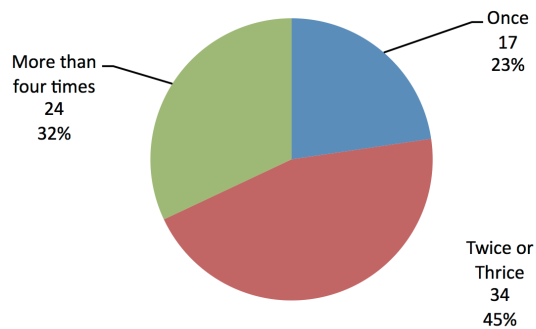


Figure1 How many times did blackouts occur?

In addition to differences in the number of blackouts that occurred, there was a variation in the stores' responses to blackouts (See figure 2). Some stores remained open even during blackouts (28 stores, 32.6%), some were closed (33 stores, 38.4%), and some were closed temporarily but reopened later (23 stores, 26.7%).

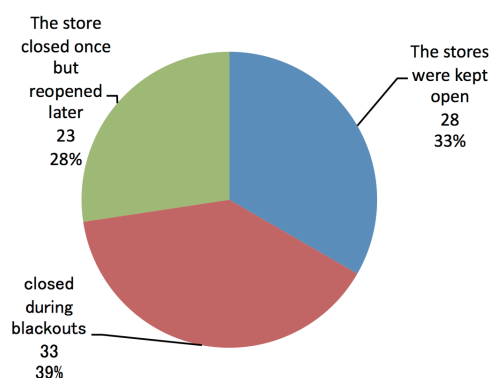


Figure2 What did you do during blackouts?

Since the first blackout, the stores have gradually taken steps to adjust to the new situation. For instance, they have changed their business hours, displayed storefront signs that read “blackouts now, but on sale” or “saving electricity” or used candles and lamps to save electricity (See figure 3). In particular, among all the types of businesses, restaurants and



Left: Photo2 Notice for changes in business hours (3/11/2011)

Note: Photograph by Takashi Machimura.

Right: Photo3 Closed McDonald's during blackouts (3/17/2011)

Note: Photograph by Takashi Machimura.

food stores were the most active in finding a solution.

One grocery store owner mentioned, “We are having a hard time right now because of Fu-hyo (風評).”<sup>6</sup>

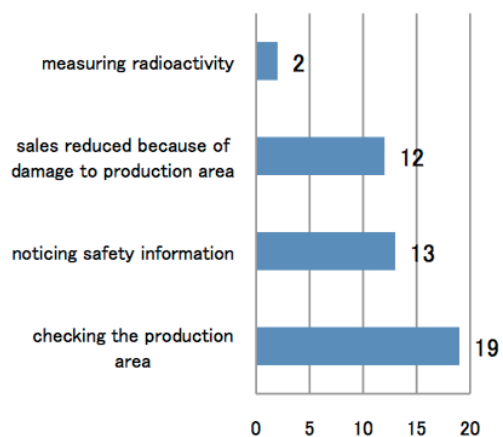


Figure3 Temporary solutions to blackouts(plural responses)

## 2) Damages and Changes after the Fukushima Nuclear Accident

Not only rolling blackouts but also the prolonged influence of radioactive emissions have changed and damaged local shopping streets. In the survey, more than one third of all stores (31 stores, 36%) replied that they experienced some kind of change after the nuclear accident. In order to protect themselves and attract customers again, shopkeepers started check the production area while stocking goods, and they displayed and explained the radioactivity safety information of products and services: Nevertheless,

# Research

## Rolling Blackouts and Changes to Everyday Life in Suburban Tokyo: Survey of Kunitachi's Local Shopping Streets

Sunmee KIM

product sales dropped partly because of the damage to the production area (See figure 4 below).

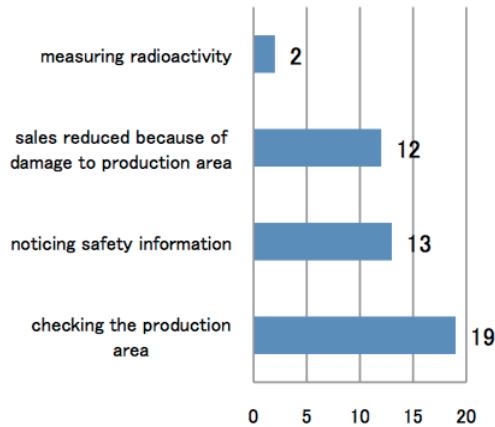


Figure4 Impacts of nuclear accident: what changed? (plural responses)

The survey showed a considerable difference in the impact of the disaster depending on the types of products and services of each store. Restaurants and delicatessens experienced considerable damage to both sales and store management. Only two stores, both restaurants, reported that they measured radioactivity. One electrical store was forced to change its sales strategy; its owner described, “We had been promoting oar electrification to our customers so far, but I’m regretting it. Now I’m aware of the need to save electricity.

### 3) “Mood of Self-restraint” (Zishuku) and Changes in Sales

Immediately after the earthquake, the media frequently mentioned the rapid spread of a collective “mood of self-restraint (自粛ムード).”<sup>7</sup> In our study, this statement appeared to be partly true; two-third of respondents (58 stores) answered that they actually experienced such a mood. Stores such as restaurants, clothing apparels and cosmetics stores tended to take the mood of self-restraint more seriously than grocery stores or pharmacies, which sell life necessities such as rice, vegetables, canned food, mineral water, toilet paper, and batteries (See figure 5).

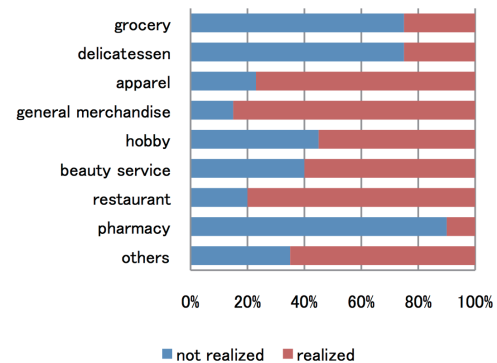


Figure5 Realized the ‘mood of self-restraint’?

The city’s mood of self-restraint is also reflected in the sales of stores. Sixty-three stores (73.3%) answered that their sales from March to April had declined compared to those during the same period in the previous year. These responses were frequent especially in restaurants, beauty parlors, and clothing stores (Table 1).

Table 1 Change in sales of businesses (No responses to the survey not included)

	March/April			July/August		
	decreased	unchanged	increased	decreased	unchanged	increased
grocery	2	1	1	4		
Delicatessen	3		1	4		
Apparel	11	2		6	6	1
Merchandise	10			6	3	1
Hobby	3	2		3	2	
Beauty	9	4		7	3	3
Restaurant	22	2	1	15	7	2
Pharmacy	2	2	3	3	4	
Others	1	2			3	
Total	63	15	6	48	28	7

On the other hand, several grocery stores and pharmacies increased their sales during the same period, which could be related to radioactive contamination and continuing aftershocks; people tried to hoard food, water, battery, and masks so that they are prepared for another disaster. According to the Nikkei Point Of Sales system (POS) survey, supermarket sales of emergency provisions and daily goods such as sanitary napkins, sport beverages, canned foods, and batteries rapidly increased in the

# Rolling Blackouts and Changes to Everyday Life in Suburban Tokyo: Survey of Kunitachi's Local Shopping Streets

Sunmee KIM

Tokyo metropolitan area, until March 16.<sup>8</sup>

The retail situation improved partly from July to August. Forty-two percent of stores (35 stores) reported that their sales had increased or were stagnant. However, some grocery and food stores answered that their sales had decreased. It is difficult to speculate the reason for this occurrence, but consumers' awareness of food safety issues is considered as one possibility.

## SUMMARY

The Great East Japan Earthquake and Fukushima nuclear disaster led to various catastrophic experiences and generated solutions, even within the same neighborhood. Following the unprecedented disaster, not only did the crisis conditions differ but also the solutions to overcome it varied among individual stores (i.e., shopkeepers). The aftermath of the disaster revealed each actor's endurance and capacity for restoration.

In spite of major inconveniences and anxieties brought about by the disaster, the everyday life in Tokyo continues. The actual rolling blackouts have not been in effect since April, but because they can be implemented again at any time, "saving electricity" signs have remained in Kunitachi storefronts even after summer. "Saving electricity" is not just a phrase that characterizes the spring–summer of 2011; the need to save electricity partially restructured Tokyo's everyday life, continuing up to present. Even now, the Japanese society debates upon the issues of disaster reconstruction and nuclear power.

リース,「需給逼迫による計画停電の実施と一層の節電のお願いについて【3月14日9時改訂版】」, 2012年8月28日取得.)

2 "The domestic car industry considers reduce of working hours due to the government's request for saving electricity," Asahi Shimbun, March 25, 2011 (=「国内の自動車メーカ、政府による電力主要抑制に先んじて、業界全体での生産調整による作業時間の分散化を検討」朝日新聞、2011年3月25日)

3 "Rail service in the metropolitan area reduced by 20%–70% of the normal frequency, which is not a major problem," Asahi Shimbun, March 15, 2011 (=「首都圏の鉄道は主要区間で平常の2~7割まで本数を減らして運行。大きな混雑なし」朝日新聞、2011年3月15日)

4 "Because of the implementation of rolling blackouts, departments decide closing temporarily and reduce working hours," Asahi Shimbun, March 13, 2011 (=「百貨店、計画停電実施決定を受け、14日は臨時休業や営業時間短縮を決定」朝日新聞、2011年3月13日)

5 Kunitachi City Office, Kunitachi City Office website, Retrieved August 28, 2012 (<http://www.city.kunitachi.tokyo.jp/shokai/jinko/004162.html>). (=国立市役所ホームページ、2012年8月28日取得)

6 "Fu-hyo (風評)" means suspicion or misinformation about farm products. After the Fukushima nuclear accident, shipments of agricultural and livestock products for specific regions were suspended. Even after the price of radioactivity-checked products reduced, farmers and fisherman suffered major economic losses from reputation damage.

7 "Jishuku" (自粛) can be defined as a combination of moods of self-restraint and self-denial. According to Kensuke Suzuki, an associate professor of sociology at Kwansei Gakuin University, self-restraint may be a way of coping with the trauma of the loss of lives as well as the spreading fears of radioactive fallout. "Jishuku" has become a way for people in Tokyo to express solidarity in times of crisis. ("In Deference to Crisis, a New Obsession Sweeps Japan: Self-Restraint," The New York Times, March 27, 2011)

8 NHK News, March 16, 2011 (according to The Great East Japan Earthquake Chronicle 2011.3.11 – 2011.5.11, p.59).

## Notes

1 TEPCO'S press release on March 14, 2011, TEPCO website, Retrieved August 28, 2012 (<http://www.tepco.co.jp/cc/press/11031404-j.html>). (=東京電力プレスリ